J = 4698 - 8 -

THE LANCET.

No. 4263. Vol. CLXVIII. LONDON, SATURDAY, MAY 13, 1905. [Pp. 120+48.

CONTENTS.

A LECTURE on a Case of Concealed Menstruation; with Remarks on Treatment. Delivered at the Medical Graduates' College and Polyclinic on Feb. 22nd, 1905, by PETER HORROCKS, M.D. Lond., F. R. C. P. Lond., Senior Obstetric Physician to, and Lecturer on Midwifery and Diseases of Women at, Guy's Hospital... 1247

THE LUMLEIAN LECTURES on Nutrition and Malnutrition. Delivered before the Royal College of Physicians of London on March 28th and 30th and April 4th, 1905, by W. H. ALLCHIN, M.D. Lond., F.R.S.Edin., Fellow and Censor of the College; Senior Physician to the Westminster Hospital. — Lecture II. (*Concluded*) 1250

ORIGINAL ARTICLES.

A Case of "Splenomegalic" or "Myelopathic" Polycythæmia with True Plethora and Arterial Hypertonia, without Cyanosis. By F. PARKES WEBER, M. D. Cantab., F.R.C.P.Lond., Physician to the German Hospital, London. (*Illustrated*) 1254

Symptomatologie et Diagnostic de l'Angine à Spirilles et Bacilles Fusiformes (Angine de Vincent). Par le PROFESSEUR H. VINCENT.—(*Illustrated*)..... 1260

Treatment of Complete Uterine and Vaginal Prolapse. By FREDERICK HOLME WIGGIN, M.D., formerly Vice-President of the American Medical Association and President of the New York State Medical Association, &c. (*Illustrated*) 1262

Carcinoma of the Uterus and its Surgical Treatment. By EDWARD T. TBRING, F.R.C.S. Eng., L.R.C.P. Lond., Surgeon to the Prince Alfred Hospital, Sydney, &c. 1264

The Technique of the Operation for Adenoids and Enlarged Tonsils, with some Practical Suggestions. By FREDERICK C. CABLÉ, M.B. Lond., M.R.C.S.Eng., Senior Clinical Assistant to the Throat Hospital, Golden-square, W..... 1265

Anatomical Peculiarities of a Gall-bladder and an Appendix. By FERGUSON LEMON, M.B., B.S.Melb. 1265

Cæsarean Section for Congenital Malformation of the Cervix Uteri; Recovery. By H. TRAILL SKAE, M.B., Ch.B. Aberd., Honorary District Surgeon to the Royal Maternity Charity..... 1266

MEDICAL SOCIETIES.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY:
A Case of "Splenomegalic" or "Myelopathic" Polycythæmia with True Plethora and Arterial Hypertonia, without Cyanosis 1266

MEDICAL SOCIETY OF LONDON:
General Meeting. — Discussion on the Perineal and Suprapubic Methods of Prostatectomy 1267

OPHTHALMOLOGICAL SOCIETY:
Histological Changes in Choroiditis.—Results of Birth Injury to the Cornea.—Anterior Synechia of the Pupillary Membrane.—Bjerrum's Method of Testing the Field of Vision.—Pulsating Exophthalmos Cured by Carotid Ligature..... 1268

OBSTETRICAL SOCIETY:
Mortality in Childbed both in Hospital and in General Practice. — Repeated Tubal Pregnancy. — Gonococcic Peritonitis..... 1269

HUNTERIAN SOCIETY:
Discussion on Influenza 1270

EPIDEMIOLOGICAL SOCIETY:
The Spread of Small-pox around Small-pox Hospitals in Relation to Aerial Convection 1271

WINDSOR AND DISTRICT MEDICAL SOCIETY:
The Clinical Aspects of General Paralysis 1272

OTOLOGICAL SOCIETY:
Vertigo 1272

REVIEWS AND NOTICES OF BOOKS.

Health at School, considered in the Mental, Moral, and Physical Aspects. By Clement Dukes, M.D., B.S.Lond., F. R. C. P. Lond. Fourth Edition 1273

Transactions of the American Ophthalmological Society ... 1273

Le Béri-béri: Définition, Etymologie, Historique, Bactériologie, Symptomatologie, Pathogénie, Pathologie Expérimentale, Traitement. Par le Dr. H. Vivian Dangerfield 1274

A Treatise on Bright's Disease and Diabetes. By James Tyson, M.D. Second Edition. Including a Section on the Ocular Changes by George E. de Schweinitz, M.D. 1275

A Nurses' Handbook of Obstetrics. By Joseph Brown Cooke, M.D..... 1276

Ward, Lock, and Co's. Illustrated Guide Books. Twenty-sixth Edition 1276

Medical Philology. Gathered by L. M. Griffiths, M.R.C.S. Eng..... 1276

How to Keep "Fit," or the Sailor's Guide to Health in all Parts of the World. By Fleet-Surgeon W. G. K. Barnes, M.D.R.U.I., R.N. ... 1276

Obstetrics for Nurses. By Joseph B. de Lee, M.D. 1276

A Text-book of Gynecology. Edited by Charles A. L. Reed, A.M., M.D. Second Edition 1276

The Principles and Practice of Asepsis. By A. S. Vallack, M.B. and Ch.M.Syd..... 1277

The Sanitary Inspector's Handbook. By Albert Taylor. Fourth Edition 1277

Essays in Puritanism. By Andrew Macphail 1277

In Loco Parentis: Chapters on Institution Life and Work. By the Rev. Marshall George Vine, B.A..... 1277

LEADING ARTICLES.

INTERNATIONAL AMENITIES ... 1278

ACCIDENTS CONNECTED WITH MOTOR-CARS..... 1279

IDENTIFICATION BY FINGER PRINTS 1280

ANNOTATIONS.

The Metropolitan Hospital Sunday Fund 1281

Vincent's Angina 1281

University College, London ... 1282

The Structure of Nerves and its Application to Nerve Anastomosis..... 1282

American Quack Nostrums ... 1282

Abnormalities of the Gall-bladder and the Appendix Vermiformis..... 1283

Vital Statistics in Egypt..... 1283

Pulmonary Fistula 1284

The Ilkley Coronation Cottage Hospital..... 1284

The Amounts of Neon, Helion, and Hydrogen in the Air..... 1285

The Prophylactic Injection of Diphtheria Antitoxin 1285

The London School of Tropical Medicine 1285

The Medical Society of London 1286

The National Association for the Prevention of Consumption and Other Forms of Tuberculosis..... 1286

MEDICINE: ITS PRACTICE AND ITS PUBLIC RELATIONS.

Chapter XI.

The Poor-law and Medical Service 1287

LOOKING BACK.

(From THE LANCET, Saturday, May 12, 1827) 1293

VITAL STATISTICS:
Health of English Towns ... 1293
Health of Scotch Towns 1294
Health of Dublin 1294
Vital Statistics of London during April, 1905 1294
Analysis of Sickness and Mortality Statistics in London during April, 1905 1295

SPECIAL ARTICLES.

Visit of British Physicians and Surgeons to Paris 1297

The Earthquake in the Punjab: A Narrative by a Medical Survivor..... 1250

The German Congress of Internal Medicine. — (*Concluded*) 1291

The Dinner of the London School of Tropical Medicine.. 1292

Royal College of Physicians of Edinburgh..... 1293

The Services..... 1296

The International Association of the Medical Press.—(*Concluded*) 1298

Manchester 1300

Leeds 1301

Wales and Western Counties Notes 1301

Scotland..... 1302

Ireland 1303

Paris 1303

CORRESPONDENCE.

An Interesting Note upon Holden's Osteology (Mr. Cornelius Hanbury) 1297

The Treatment of Tuberculosis of the Lungs by means of Tuberculin (Dr. H. Batty Shaw)..... 1297

If Tuberculosis should be Certified, why not Syphilis? (Mr. C. F. Marshall) 1297

The Relationship between Plague Infected Animals and the Disease in Man (Dr. H. S. Willson) 1297

Medical Matters in the Lay Press 1309

Difficulties under the Infectious Diseases Notification Act (Mr. Leonard Potts) 1309

Traffic in Medical Practices (Mr. Percival Turner) 1310

A Question of Ethics..... 1310

Luton's Artificial Serum (Mr. F. S. D. Hogg)..... 1310

Wanted—a Home 1310

Medical Titles 1310

OBITUARY.

Sir John Sibbald, M.D. Edin., F.R.C.P.Edin. 1304

Thomas Creed, M.D. St. And., M.R.C.S.Eng., L.S.A. 1304

MEDICAL NEWS.

St. Mary's Hospital 1277

Royal College of Surgeons in Ireland 1297

Pass-list of the University of Oxford 1304

Foreign University Intelligence 1304

Central Midwives Board 1305

The Bactericidal Action of Hydrogen Peroxide on the Germs in Water 1305

Mary Wardell Convalescent Home for Scarlet Fever 1305

Memorial to the late Dr. T. Morton 1306

Sussex Medical Benevolent Society 1306

PARLIAMENTARY INTELLIGENCE.

Notes on Current Topics 1306

House of Commons 1306

Books, &c., received 1307

Appointments 1308

Vacancies 1308

Births, Marriages, and Deaths.. 1308

Notes, Short Comments, and Answers to Correspondents... 1309

Medical Diary 1310

FOR INDEX TO ADVERTISEMENTS SEE PAGES 2 & 4.

INDEX.

MEDICAL AND OTHER BOOKS AND PUBLICATIONS.

COVER. PAGE

BAILLIERE TINDALL & COX:—
Caldwell .... Prevention of Disease in Armies 1
Clarke ..... Refraction of the Eye .. 1
Hinder ..... Clinical Surgery 1
Lake ..... Diseases of the Ear 1
Moorhead .. Surface Anatomy 1
Vallack ..... Principles of Asepsis .. 1

CAMBRIDGE UNIV. PRESS:—
Clemow .... Geography of Disease.. 1
Duckworth.. Studies from the Anthropological Laboratory 1
.. Morphology, &c. 1
Nuttall..... Blood Immunity, &c. .. 1
Hollcston .. Morbid Anatomy 1
Simpson .... Treatise on Plague 1

CHURCHILL, J. & A.:—
Squire's Pocket Companion to the British Pharmacopœia 1

DAVIDSON & CO.:—
Grant ..... Study of Laryngoscopy 1

GLAISHER:—
Make ..... Intestinal Catarrhs 1
.. .. Eczema 1
Horsfield .. Constipation 1
Savill ..... Neurasthenia 1

KIMPTON, H.:—
Outlock & Chaplin .. Science and Art of Prescribing 1

LAMONT, CORLISS & CO.:—
Marchand .. Therapeutical Applications of Hydrozone .. 1

LEWIS:—
Lewis's Circulating Library 1

MACMILLAN & CO.:—
Tubby & Jones .... Surgery of Paralysis.... 1

PENTLAND, Y. J.:—
Teacher & Miles..... Manual of Surgery 1

SAUNDERS & CO.:—
Saunders' Books 1

MEDICAL LIBRARIES, &c.:—
Catalogue of the Institute of Hygiene 1

ASH & SONS:—
Hewitt ..... Nitrous Oxide, &c. 6

BAILLIERE, TINDALL & COX:—
Barwell .... Lateral Curvature of the Spine, &c. 10
Bigg ..... Constipation 6
De Santi .... Malignant Disease of the Larynx 10
Harman .... The Conjunctiva in Health, &c. 6
Lake ..... Laryngeal Phthisis 10
Lamb ..... Examination of the Throat, Nose, and Ear 6
Mayo-Collier Mouth Breathing 10
.. Chronic Progressive Deafness 10
Owen..... Cleft-Palate, &c. 11
Stuart-Low.. Mucous Membranes 10
Thorne..... Nauheim Treatment.... 10
Turner..... Appendicitis 10
Vincent .... Nutrition of the Infant 6

CASSELL & CO.:—
Rhad-Sutton Tumours 51
Remaquet .. Serum, Vaccines, and Toxines 51
Bruce ..... Materia Medica, &c. 51
Burton-Fanning .. Pulmonary Tuberculosis 51
Gould ..... Surgical Diagnosis 51
Herman .... Diseases of Women 51
.. First Lines in Midwifery 51
Hutchinson.. Syphilis 51
Hutchison & Rainy .. Clinical Methods 51
Luff & Page.. Manual of Chemistry .. 51
Manson Sir P. Tropical Diseases 51
Morris, H. .. Surgery of the Kidney and Ureter 5, 51
.. .. Injuries and Diseases of Genital, &c., Organs .. 6
Morris, M. .. Diseases of the Skin 51
Owen..... Surgical Diseases of Children 11
Savage ..... Insanity, &c. 51
Treves, Sir F. Operative Surgery 51
.. Surgical Operations 51
.. Surgical Anatomy..... 51
.. Intestinal Obstruction.. 51
Yeo ..... Mineral Springs, &c. 51
.. .. Food in Health, &c. 51
.. .. Medical Treatment 51

CHURCHILL, J. & A.:—
Butlin ..... Malignant Disease..... 6
Coles..... The Blood 6

CHURCHILL—(Continued). PAGE
Craig..... Psychological Medicine 2
Colyer ..... Diseases of the Rectum & Cancer of the Rectum .. 6
Jellett ..... Midwifery 3
Lang & Abrahams.. German-English Dictionary of Terms..... 3
Lucas ..... Book of Prescriptions .. 3
Maylard .... Abdominal Pain 3
Savill ..... Clinical Medicine 3
Simon ..... Physiological Chemistry 3
Squire's Pocket Companion 3
Taylor, J. .. Paralysis, &c. 3
Taylor's Medical Jurisprudence 3
West ..... How to Examine the Chest..... 6

CONSTABLE & CO.:—
Banks & Turner .... Diseases of the Appendix 9
De'anere, Poirier & Cuneo .... Lymphatics 8
Hutchinson.. Leprosy and Fish Eating 9
Lauwonder.. Methods of Treatment.. 8
Leaf ..... Surg. Case Book Charts 8
Wright..... Anti-Typhoid Inoculations 5

GLAISHER:—
West ..... Granular Kidney, &c. .. 6

GRIFFIN & CO.:—
Blyth..... Poisons 50
.. .. Foods 50
Bury ..... Clinical Medicine 50
Davis ..... Text-book of Biology .. 50
Donald ..... Midwifery 50
Griffin's Pocket-book Series 50
Landois .... Human Physiology 50
Macleod .... Examinations in Public Health 10
Mann ..... Forensic Medicine, &c.. 50
.. .. Urine 50
Pavlow .... Digestive Glands 50
Phillips .... Diseases of Women 50
Reidel & Delepine .. Urinary Sediments 50
Riddell..... Ambulance 50
Stirling..... Practical Physiology .. 50
Taylor ..... Applied Anatomy 50
Von Jaksch.. Clinical Diagnosis 50
West ..... Organs of Respiration.. 6

KEGAN PAUL & CO.:—
Taylor ..... Diseases of the Eye 10

LEWIS:— PAGE
Lewis ..... Diseases of Women 6
.. .. Cancer of the Uterus .. 6

LONGMANS, GREEN & CO.:—
Ashby & Wright.... Diseases of Children.... 9
Cragin ..... Manual of Pathology .. 9
Dakin ..... Handbook of Midwifery 9
Dickinson .. Renal and Urinary Affections 9
Gray ..... Anatomy 9
Halliburton.. Chemical Physiology .. 9
Quain ..... Elements of Anatomy .. 9
Schäfer..... Essentials of Histology 9
Smale & Colyer .... Diseases of the Teeth .. 9
Spriggs..... The Life and Times of Thomas Wakley 11

MEDICAL PUBLISHING CO.:—
Lane..... Chronic Constipation .. 6

PRACTITIONER, Ltd.:—
Clarke ..... Dislocation of the Hip.. 11

RENSHAW:—
Wood ..... Application of Trusses 10

RIVINGTON & CO.:—
Dukes ..... Health at School 12

SAUNDERS & CO.:—
Bickham .... Operative Surgery..... 5
Draper ..... Legal Medicine 5
Friedenwald & Rahrich.. On Diet 5
Moynihan .. On Gall-stones 5
Nothnagel's Practice..... 10
Stelwag n .. On the Skin 5

SMITH, ELDER & CO.:—
Keetley .... Orthopædic Surgery.... 11
.. .. Gastric Ulcers..... 11
.. .... Complicated Fractures 11

THE LANCET PUBLICATIONS .. 11

WRIGHT & CO. (BRISTOL):—
Bishop ..... Pelvic Diagnosis 7
Downs ..... Massage 7
Fye's Surgical Handicraft 7

MEDICAL LIBRARIES, &c.:—
Behnke—Stammering 12
Glaisher—Publishers' Remainders..... 1
Lewis's Medical and Scientific Library 7

OFFICIAL AND GENERAL ANNOUNCEMENTS.

APPOINTMENTS VACANT:—
Birkenhead Borough Hospital 89
Birmingham and Midland Hospital for Skin Diseases 89
Bristol General Hospital..... 89
Cancer Hospital, Fulham-road..... 89
Carnegie Dunfermline Trust 89
Central London Ophthalmic Hospital 89
Cornwall County Asylum, Bodmin.... 89
Coventry and Warwickshire Hos. 89, 90
Darenth Asylum, Dartford 90
Devon County Asylum, Exminster.... 90
East London Hos. for Children, &c. .. 89
Evans Sons, Lescher & Webb, Bartholomew-close 89
Evelina Hospital for Sick Children 89, 90
Grimsby and District Hospital..... 89
Lister Institute of Preventive Medicine, Elstree 89
Metropolitan Hospital, Kingsland-rd. 89
Miller Hospital and Royal Kent Dispensary, Greenwich-road 89
Mundesley Sanatorium, Norfolk..... 89
Napsbury Asylum near St. Albans .. 90
Needes, Arundel-street 90
Norfolk and Norwich Hospital..... 89
Norfolk County Asylum, Thorpe 90
Northampton General Hospital 89
North-Eastern Hospital for Children, Hackney-road 90
North-West London Hospital, Kentish Town-road 90
Royal Infirmary, Hull 89
Royal Sea-bathing Hospital, Margate 89
Royal Waterloo Hospital for Children 89
Royal Victoria Hospital, Newcastle-upon-Tyne 89
Royal Westminster Ophthalmic Hos. 89
Sidcup Sanatorium, Auchterhouse.... 89
Society of Apothecaries of London .. 89
Somerset County Council 90
State Criminal Lunatic Asylum, Broadmoor 90
St. Bartholomew's Hos., Rochester .. 89
Victoria Hospital for Children, Chelsea..... 89
West-End Hospital for Diseases of the Nervous System 89
Western General Dispensary, Marylebone-road 89
West London Hospital 89
Westminster General Dispensary 89

ASSISTANCIES, MEDICAL 95

ASYLUMS, HOMES, &c.:—
Abergwyn, the Biarritz of Wales .. 80
Ashwood House, Kingswinford 87
Baden in Switzerland 84
Barham House, Lambeth 86
Barnwood House Hospital..... 78

ASYLUMS—(Continued).
Bethel Hos. for Mental Diseases 86
Bishopstone House, Bedford..... 87
Buntingford House Retreat, Herts .. 81
Camberwell House, Peckham-road .. 86
Clarence Lodge, Clapham-park 86
Coppice, The, Nottingham..... 79
Cotswold Sanatorium 87
Crookesbury Sanatorium, Surrey 82
Dalrymple Home, Rickmansworth 86
David Lewis Colony, Alderley Edge.. 87
Denton Jones' Sanatorium, Parkstone 87
Dr. Shaddock's Sanatorium, Dartmoor 89
Dr., Shanbrook 86
East Anglian Sanatorium, Nayland .. 82
Enclefield, Ashford 86
Edwards, Herongate 85
Engadine 74
Ergelberg 86
Fairford Retreat, Gloucestershire..... 85
Ferryton, Barnet 75
Fleetwood-Taylor, Lancaster-gate.... 87
Flower House, Catford 79
Grove House, Church Stretton 76
Grove, The, Catton, Norwich 73
Hadley Open Air Sanatorium, Ipsden 85
Haydock Lodge, Newton-le-Willows 81
High Shot House, Twickenham 87
Hitch, Mrs., Hollington 76
Home Sanatorium, Bournemouth 72
Inverurie Lodge Retreat, Colinsburgh 80
Lady Superintendent, Brighton 85
Lady Superintendent, Streatham 85
Lawson, Nordrach-on-Dee, Banchory 82
Leech, Clapham-park 86
Leigh House, Warwick 87
London Fever Hospital 85
London Open-Air Sanatorium, Wokingham 85
Lukfaw sanatorium, Porthcawl 85
"Manxmead," Blackheath 85
Maternity Home, New King's-road .. 85
Melbourne House, Leicester..... 76
Meredin Hills Sanatorium, Wells 82
Mont House, Tunworth 87
Neuilly, surgeon's bill..... 89
Nordrach in Wales 81
Nordrach-upon-Mendip Sanatorium.. 81
Northlands Retreat, Wandsworth 87
Northumberland House, Finsbury-park 87
Northwoods House, Winterbourne .. 86
Norwood Sanatorium 85
No. 687, L.O., Strand..... 89
No. 689, L.O., Strand..... 89
Ochil Hills Sanatorium, Kinross-shire 83
Overdale, Whitefield..... 79
Park House Convalescent, &c., Home, Waterlooville..... 83
Plas-yn-Dinas, Merionethshire 81

ASYLUMS—(Continued). PAGE
Plympton House, South Devon 78
Rentoven Open-Air Sanatorium, Warrenpoint..... 83
Shaftesbury House, Formby 80
Spa, Belgium 87
Springfield House Private Asylum, Bedford 77
St. Andrew's Hospital, Northampton 78
St. Luke's Hospital, E.C. 78
Stocker, Craven-street..... 88
Stone House, Canterbury 86
Stretton House, Church Stretton 76
Thundercliffe Grange, nr. Rotherham 88
Tower House, Leicester 76
Tuthill, Fakenham 86
Vale of Clwyd Sanatorium..... 81
Warneford Asylum, Oxford 80
West Malling-place, Kent 80
Wonford House, Exeter 78
Wye House, Buxton 76
Wyke House, Isleworth 78
Yarrow Convalescent House, Broadstairs 80

BATHS:—
Bad Brückenau 84
Bad Ems 85
Badenweiler 84
Bad Homburg 84
Bad Nauheim 77
Garnigel, Switzerland 84
Harrogate 85
Langenschwalbach..... 85
Matlock Bath 84
Moffat & Dryfesdale 85
Smedley's, Matlock 85

COMPANIONS 87

FINANCIAL, &c. 87

HOTELS:—
Bad Nauheim—Park Hotel 77
Bergen Open Air Sanatorium, Norway 72
Grand Hotel Carron, Bloxnay 77
Ilfracombe Hotel 77
Kissingen—Hotel de Russie 77
Montreux Hotel and Cursaal, Belmont 77
Philips' Dunblane Hydro 77
Port Orotava—English Grand Hotel .. 77

HOUSE & ESTATE AGENTS .. 94, 95

LIFE & FIRE ASSURANCES 97

MEDICAL ACCOUNTANTS, &c. .. 95

MEDICAL AGENTS:—
Dr. Field Hall 93
Lee & Martin 94
London Medical Agency 94
Manchester Medical Agency 94
Manchester Medical, &c., Association 94

MEDICAL AGENTS—(Continued). PAGE
Medical Agency 91
Needes, Herbert's 94
Needes, J. C. 93
Orridge 90
Peacock & Hadley 90
Portland House Medical Agency..... 91
Sharp, Clinical, &c., Assoc. .. 92, 93
Southern Medical Agency 94
Turner 91
Wilson & Son 91

MEDICAL SCHOOLS (LONDON):—
Cooke's School of Anatomy 75
West London Post-Graduate College.. 75

NURSING INSTITUTES:—
Clapton Nursing Home 76
General Nursing Association 76
Hos. for Sick Children, Gt. Ormond-st. 76
Leeds Trained Nurses' Institution 76
London Nurses' Association 76
Male and Female Nurses' Assoc. 77
Male Nurses' Association 77
Male Nurses' Co-operation..... 76
Middlesex Hos. Trained Nurses' Inst. 76
Mildmay Nursing Institute 77
Nurses' Co-operation, Portland-place 77
Queen Charlotte's Lying-in Hos..... 77
Registered Nurses' Society 77
St. Bartholomew's Hos. Nurses' Inst. 76
St. John's House..... 76
Temperance Male and Female Nurses' Co-operation 76
Temperance Male Nurses' Co-operation 76

OFFICIAL NOTICES:—
College of Hygiene, &c., Dunfermline 74
Guy's Hospital Dental School 72
Hospital for Diseases of the Throat .. 74
King's College, London 74
Medical Exhibition 72
Medical Graduates' College, &c. 73
Mount Vernon Hospital for Consumption 73
New York Post-Graduate Medical School and Hospital 73
Oxford Univer-ity 73
Pathological Laboratories, Langham-place 74
Royal London Ophthalmic Hospital.. 74
Royal Naval Medical Examination .. 74
Samaritan Free Hospital for Women 74
Surgical Aid Society 74

PARTNERSHIPS & PRACTICES 95

RAILWAY & STEAMSHIP CO.'S. 87

SCHOOLS, PREPARATORY, &c. .. 75

TUTORS & LECTURERS.... 74, 75, 76

(For Index to Trade and Miscellaneous Advertisements see page 4).

Some Books of 1905 - - Published by J. & A. Churchill

FRED. J. SMITH, M.D., F.R.C.P.,
Lecturer on Medicine, London Hospital Medical School; Author of "Lectures on Medical Jurisprudence and Toxicology."

Taylor's Medical Jurisprudence:
Principles and Practice.
Fifth Edition. Two Volumes. 36s. net.

MAURICE CRAIG, M.A., M.D., M.R.C.P.,
Physician and Lecturer on Mental Diseases, Guy's Hospital; Senior Assistant Physician, Bethlem Royal Hospital, London.

Psychological Medicine:
A Manual of Mental Diseases for Practitioners and Students.
With 22 Plates. 12s. 6d. net.

JAMES TAYLOR, M.D., F.R.C.P.,
Physician National Hospital for Paralysed and Epileptic, Queen-square.

Paralysis and other Nervous Diseases in Childhood and Early Life.
With 74 Illustrations. 12s. 6d. net.

HENRY JELLETT, B.A., M.D.,
B.Ch., B.A.O. (Dublin University), F.R.C.P.I., L.M.,
Gynæcologist and Obstetric Physician to Dr. Steeven's Hospital, Dublin; Ex-Assistant Master, Rotunda Hospital.

A Short Practice of Midwifery for Nurses,
With a Glossary of the Medical Terms used in the Book.
Second Edition. With 5 Coloured Plates and 133 Illustrations. 6s. 6d. net.

THOS. D. SAVILL, M.D. Lond.,
D.P.H. Camb., M.R.C.P.

A System of Clinical Medicine,
Dealing with Diagnosis, Prognosis, and Treatment of Disease.
Vol. I. Local Diseases and Pyrexial Disorders. 12s. 6d. net.
Vol. II. Certain General Disorders. Diseases of the Skin and the Nervous System. 8s. 6d. net.
With 286 Engravings and 4 Coloured Plates. Complete in Two Volumes. 21s. net.
"This scheme has been admirably carried out ..... a very useful and practical work."—THE LANCET (Review of Vol. I.)

HUGO LANG and BERTRAM ABRAHAMS, M.B., B.Sc.,
F.R.C.P.,
Assistant Physician, Westminster Hospital; Examiner in Physiology to the Conjoint Board.

A German-English Dictionary
Of Terms used in Medicine and the Allied Sciences.
15s. net.

A. ERNEST MAYLARD, M.B.,
B.S. (Lond.),
Surgeon to the Victoria Infirmary, Glasgow; late Examiner in Surgery to the University of Glasgow and Victoria University, Manchester; Author of "A Treatise on the Surgery of the Alimentary Canal."

Abdominal Pain, its Causes and Clinical Significance.
With 24 Illustrations. 7s. 6d. net.

E. W. LUCAS, F.I.C., F.C.S.,
Pharmaceutical Chemist; late Examiner to the Pharmaceutical Society of Great Britain; Author of "Practical Pharmacy."

The Book of Prescriptions,
With an Index of Diseases and Remedies.
With an Introduction by ARTHUR LATHAM, M.D., F.R.C.P.
Eighth Edition (Beasley). 5s. net.

ALFRED C. COLES, M.D., D.Sc.,
F.R.S. Edin.

The Blood: how to Examine and Diagnose its Diseases.
Third Edition. With 7 Coloured Plates. 10s. 6d. net.

CHARLES E. SIMON, M.D.,
Late Assistant Resident Physician, Johns Hopkins Hospital, Baltimore; Fellow of the American Academy of Medicine.

Physiological Chemistry
For Students of Medicine and Physicians.
Second Edition. 14s. net.

London: J. & A. Churchill, 7, Great Marlborough Street.

INDEX—(CONTINUED).

TRADE AND MISCELLANEOUS ADVERTISEMENTS.

COVER.

FOODS:— PAGE
Aylesbury Dairy Co.—
Humanised Milk ... II
Fry's Malted Cocoa ... III
Valentine's Meat Juice Co.—
Meat Juice ...

MED. & SURG. APPLIANCES:—
Bailey & Son—
Abdominal Belts ... IV
Washable, &c., Trusses ... IV

MISCELLANEOUS:—
Merryweather's Garden Hoses ... III

AMBULANCES:—
St. John Ambulance—
Invalid Carriages ... 18

BICYCLES, &c.:—
Norton—Tricycles ... 14

BOTTLE MERCHANTS:—
Isaacs ... 70
Islington Glass Bottle Company ... 70
Kilner Brothers, Ltd. ... 18

CARRIAGES, MOTORS, &c.:—
Armstrong—
Coachmen's and Grooms' Liveries 14
Cember—Single Brougham ... 16
Daimler Motor Co. ... 15
Humber, Ltd.—
Motor Cars ... 16
Mayhorn & Son—
Medical Coupé ... 14
Star Motor Agency—
Motor Cars ... 14
87, George-street, Portman-square—
Secondhand Carriages ... 16

CHEMISTS & DRUGGISTS:—
Allen & Hanburys—
Eyrol-Hypophosphites ... 45
nyzin ... 42
Ambrus & Ambrus—
Formolyptol ... 29
Anglo-American Pharmaceutical Co.—
Huxley's Syrup of Glycero-Phosphates ... 57
Antikamnin Chemical Co.—
Antikamnin Tablets ... 25
Bentley's Liquors ... 62
Bayer Co.—
Veronal ... 30
Heimitol Protargol ... 31
Heroin Hydrochloride ... 31
Biogen Co.—Biogen & Dermogen ... 57
Brady & Martin—
Saline Infusion Apparatus ... 61
Brin's Oxygen Co.—Brin's Oxygen ... 63
British Anatoxine Manufacturing Co.—
Antitoxine ... 64
Buchner, Schacht & Co.—
Sandow's Carbonated Acid Bath ... 62
Ed. Brom-Salt ... 65
Sandow's Artificial Mineral Water Salts ... 62
Bullock & Co.—
Pepsine Pural ... 62
Acid Glycerine of Pepsine ... 62
Burgoyne, Burbidges & Co.—
Unguentum Hayden ... 65
Calomelol ... 65
Novargan ... 65
Burroughs, Wellcome & Co.—
Kepler Solution ... 45
Lanoline Toilet Powder ... 44
National Antarctic Expedition ... 46
Discovery Exploring Ship ... 46

CHEMISTS—(Continued). PAGE
Candol Depôt—Candol ... 23
Chassy & Co.—
Glyco-Thymoline ... 36
Glyco-Heroin ... 37
Mal-Marobe ... 22
Cosmo Chemical Co.—
Kuna ... 24
Denver Chemical Co.—
Antiphlogistine ... 27
Dinneford's Fluid Magnesia ... 60
Duncan, Flockhart & Co.—
Chloroform ... 35
Chloryl Anæsthetic ... 35
Fairchild Bros. & Foster—
Zymine Peptonising Tubes ... 34
Fellows—Syr. Hypophos. Co., Fellows ... 23
Goodecke & Co.—
Arsenol Suppositories ... 65
Podophin Pills ... 65
Hewlett & Son—
Mist. Pepsinæ Co. c. Bismuthe ... 62
Heyer & Co.—Hafo-Seifen ... 60
Kirby & Co.—
Pargyn ... 65
Kreochyle Co.—
Barff Soro-Glyceride ... 62
Lamont, Corlies & Co.—
Hydrozone ... 64
Maltine Manufacturing Co.—
Maltine ... 47
" with Phosphate of Iron, Quinia, and strychnia 47
" with Cascara Sagrada ... 47
Meltzer, Andrae & Strasing—
Isoform-Hoechst ... 30
Migrainine ... 30
Orthoform ... 30
Varyl-Hoechst ... 30
Albargin ... 30
Pyramidon ... 30
Sapraemin ... 30
Helicerine ... 30
Newbery & Sons—
Pulvis Jacobi Vor ... 28
Ingivin ... 28
Bromo Soda ... 28
Parke, Davis & Co.—
Sedrabine ... 23
Price's Patent Candle Co., Ltd.—
Toilet Soaps ... 60
Raimes & Co.—
Allen's Nutrient Suppositories ... 65
Roberts & Co.—
Bromidia ... 62
Salmson & Co.—Parent Chloroform ... 60
Sanatogen Co.—Sanatogen ... 58
Savory & Moore—
Pancreatic Emulsion ... 29
Schimmel & Co.—Follantin ... 64
Scott & Bowne—
Scott's Emulsion ... 29
Seltzogene Patent Charges Co.—
Saiphagus ... 65
Smith, Ltd.—
Chloroform ... 34
Tela Vulcanicoria ... 34
Emp. Caoth. Ltd. ... 34
Squire & Sons—
Elixir Kaoak ... 60
Formanglobin ... 60
Glyphocal ... 60
Sensine ... 60
Timar Indian Grillon ... 62
Wand—Pills ... 38
Zimmermann, A. & M.—
Nafialan ... 60

EMBALMERS:—
Payne ... 72

FILTERS:—
Defries & Sons—Pasteur Filter ... 20

FOODS:— PAGE
Allen & Hanburys—
Allenbury's Milk & Cereal Diet ... 41
Armour & Co.—
Glycerine Extract of Red Bone Marrow ... 15
Benger's Food, Ltd.—
Benger's Food ... 38
Blackley's Diabetic Preparations ... 68
Boothroyd & Co.—Gluten Bread, &c. ... 70
Brand & Co.—Fever Food ... 67
Cadbury's Cocoa ... 61
Callard & Co.—
New Diabetic Foods ... 69
Carnrick & Co.—
Liquid Peptonoids ... 46
Clarke & Sons—Wrexham Mills ... 70
Digestible Tea Specialists, Ltd.—
Phenson Tea ... 68
Fairchild Bros. & Foster—
Puzo-pepsen ... 35
Fenwick, Ltd.—
Mexolaya Food ... 69
International Pharmacy, Ltd.—
Phenson ... 31
Lemco—Lemco Cookery Book ... 21
Mather Co.—Malmac ... 66
Nelson, Dale & Co.—
Hiel Hulton Beeston ... 66
Nestlé—Milo Food ... 54
Ridge's Food ... 12
Tibbles' Vi-Cocoa, Ltd.—Vi-Cocoa ... 54
Van Abbott & Sons—Gluten Flour ... 66
Virol, Ltd.—Virol ... 35
Wolferd & Son—
Hazelnaked Milk ... 62
Anzac Milk ... 62

FURNITURE, &c.:—
Carter—Invalid Furniture ... 19
Maple & Co.—Carpets ... 18
Ward—Invalid Chairs, &c. ... 13

HOSIERS, &c.:—
Cash—
Invalid's Nightdress ... 72
Washable Maternity Binder ... 72
Samuels—Shirts and Collars ... 57

MED. & SURG. APPLIANCES:—
Browning Radiant Heat Co.—
Browning Radiant Heat and Light Treatment ... 72
Hooper & Co.—
Electric Water or Air Pads ... 13
Kwhan & Sons—Bandages ... 72
May, Roberts & Co.—
Absorbent Tissue ... 98
Cotton Wools ... 99
Gamgee Tissue ... 94
Lints ... 98
Waterproof Sheetings ... 96
Millikin & Lawley—Osteology, &c. ... 13
Pope & Plante—
Electric Stockings ... 71
Medicated Sugarless Balls ... 71
Robinson & Sons—Garments ... 10
Sanitary Wood Wool Co.—
Hartmann's Cuigrat ... 17
" Aseptic Cuigrat ... 17
St. Dalmas & Co.—
Leicester Varico Leg Bandage ... 13
Wood—
Eureka Crêpe Velpeau Bandages ... 72

MINERAL WATERS:—
Contrexeville Pavilion ... 68
Davis—Tarasp Water ... 10
Hogg & Son—Piperazine Water ... 10
Ingram & Royle, Ltd.—
Purified Salt ... 60
Royal ... 60
Kissingen Mineral Waters ... 67

MINERAL WATERS—(Continued). PAGE
Oppel & Co.—
Pyrochlorinol Mineral Water ... 69
Robinson's Connemara Waters ... 67

MUSICAL INSTRUMENTS:—
Marshall—
Aug. Iss Piano Player ... 19

PHOTOGRAPHY:—
Cox—High Frequency Apparatus ... 12
Martin—Developing Reliable Film ... 17

PRINTERS & ENGRAVERS:—
Cooke & Co—
Brass Name Plates and Lamps ... 19
Cullerne—
Brass Door Plates ... 10
Heraldry, &c. ... 10

SANITARY APPLIANCES, &c.:—
British Lysoform Co., Ltd.—
Lysoform ... 59
Chlorol Hygienic Co.—
Chlorol Powder and Tablets ... 67
Cordy's Fluid Works—
Cordy's Crystals ... 72
Defries & Sons—
Dyeless Disinfector ... 20
Simon Bros.—
Hall's Distemper ... 20
Wright, Layman & Umney—
Liquor Carbonis Detergens ... 69

STATIONERY, &c.:—
John Heath & Co.—Fens ... 18

TAILORS, BOOTMAKERS, &c.:—
Fisher & Sons, Tailors ... 12

TOBACCO, CIGARS, &c.:—
Player's Navy Mixture ... 59

TYPEWRITING, &c.:—
Cambridge Typewriting Agency, Ashpal ... 72

VACCINE LYMPH:—
Allen & Hanburys—
Calf Lymph ... 71
Amer. for Pure Vaccine Lymph ... 71
Rhenish-Westphalian Calf Vaccine ... 71
Jenner—Institute for Calf Lymph ... 10
Rebman—
Glycerinated Pure Calf Lymph ... 71
Renner's Calf Lymph Establishment.. 71
Wyleys, Ltd.—Calf Lymph ... 72

WATCHMAKERS, &c.:—
Benson—
Imperial Plate and Cutlery ... 13

WINES, BEER, SPIRITS, &c.:—
Buck & Co.—
"G. B." Diabetic Whisky ... 69
Bisney & Sons—
Robson's Gout Cognac ... 66
Brut-Royal ... 66
Brown & Pank—
Fine Vintage Brandy ... 66
Buchanan—
Black and White Scotch Whisky.. 63
Gautier's Liqueur Brandy ... 70
Hennessy's Three Star Brandy ... 63
Martell's Three Star Brandy ... 64

MISCELLANEOUS:—
Fenwick—
Electric Light Path Cabinet ... 57
Incorporated Medical Practitioners' Association—Dubs Collegiate ... 64

EVERY FRIDAY.

THE LANCET.

PRICE SEVENPENCE.

SUBSCRIPTION, POST FREE.

FOR THE UNITED KINGDOM.

One Year	£1 12 6
Six Months	0 16 3
Three Months	0 8 2

TO THE COLONIES AND ABROAD.

One Year	£1 14 8
Six Months	0 17 4
Three Months	0 8 8

Subscriptions (which may commence at any time) are payable in advance.

An original and novel feature of "THE LANCET General Advertiser" is a Special Index to Advertisements on pages 2 and 4, which not only affords a ready means of finding any notice but is in itself an *additional* advertisement.

Advertisements (to insure insertion the same week) should be delivered at the Office not later than Wednesday, *accompanied by a remittance.*

Answers are now received at this Office, by special arrangement, to advertisements appearing in THE LANCET.

The Manager cannot hold himself responsible for the return of testimonials, &c., sent to the Office in reply to Advertisements; copies only should be forwarded.

Cheques and Post Office Orders (crossed "London and Westminster Bank, Westminster Branch") should be made payable to the Manager, MR. CHARLES GOOD, THE LANCET Office, 423, Strand, London, to whom all letters relating to Advertisements or Subscriptions should be addressed.

THE LANCET can be obtained at all Messrs. W. H. Smith and Son's and other Railway Bookstalls throughout the United Kingdom. Advertisements are also received by them and all other Advertising Agents.

ADVERTISING.

Books and Publications	Seven Lines and under	£0 5 0
Official and General Announcements	Ditto.	0 5 0
Trade and Miscellaneous Advertisements and Situations Vacant	Ditto.	0 4 6
	Every additional line	0 0 6

Situations Wanted: First 30 words, 2s. 6d.; per additional 8 words, 6d.

Quarter Page, £1 10s. Half a Page, £2 15s. An Entire Page, £5 5s.

OFFICES: 423 AND 424, STRAND, LONDON, W.C.; AND 1, 2, AND 3, HEDFORD STREET, ADJOINING.

A Lecture
ON
A CASE OF CONCEALED MENSTRUATION; WITH REMARKS ON TREATMENT.

Delivered at the Medical Graduates' College and Polyclinic on Feb. 22nd, 1905,

BY PETER HORROCKS, M.D. LOND., F.R.C.P. LOND.,

SENIOR OBSTETRIC PHYSICIAN TO, AND LECTURER ON MIDWIFERY AND DISEASES OF WOMEN AT, GUY'S HOSPITAL.

GENTLEMEN,—The subject of to-day's lecture was selected in order to bring before your notice in as prominent a manner as possible a method of treatment which very nearly cost the life of a patient, which has, indeed, in the past proved fatal in many cases, and which if persisted in will result in other deaths. Before reading to you the notes of the case it may be as well to remind you briefly of the various conditions that obtain in different cases, or in successive stages of the same case, in concealed menstruation.

A so-called imperforate hymen consists in most cases of a hymen in which the opening is filled in by a membrane. In such a case when the menses first appear they flow into the vagina and not being able to escape a portion gets absorbed before the next monthly flow and a portion remains. As time goes on this remainder grows until the vagina is distended with a dark treacly fluid which generally remains aseptic. This is the condition known as hæmatocolpos, and is practically free from danger no matter how it is relieved. But if the imperforate hymen is strong enough not to yield and the concealed menstruation continues then the uterus gradually gets distended and so a condition of hæmatometra is superadded, and in this state the uterine and vaginal cavities form one large common cavity concave above and below and more or less cylindrical in between. If unrelieved the Fallopian tubes become distended and so a hæmatosalpinx results. Some believe that the Fallopian tubes may become distended independently of regurgitation from the uterine cavity, the blood in that case coming from the lining of the tubes themselves, but whether that is so or not it is quite certain that if the blood in the uterus becomes septic it, as a rule, contaminates that in the tube or tubes. Finally the blood may escape into the peritoneal cavity, causing a hæmatocele, or burst into the broad ligament, causing a hæmatoma.

Concealed menstruation must be looked upon as a rare condition. Probably imperforate hymen is the commonest cause of it but it may result from congenital or acquired atresia of any part of the parturient canal, from the os internum of the uterus, downwards. For example, congenital atresia of the vagina in its lower third is, perhaps, the next most common condition met with and complete closure, from cicatricial contraction, has followed sloughing of the parts about the cervix uteri, after severe labours. So long as a patient with concealed menstruation remains unrelieved she is in danger of, firstly, septic infection and secondly, of rupture of some portion of the distended parts—namely, tubes, uterus, or vagina. Such rupture might cause serious, possibly fatal, hæmorrhage or it might give access to germs from without, which would cause a dangerous decomposition of the retained fluid. Again, in treating this condition of concealed menstruation, the very same two risks are run—septic infection and rupture. But the former is a far greater and commoner risk than the latter. Indeed, rupture is almost unknown following upon treatment, whereas sepsis and death have resulted in many cases.

Having thus sketched out briefly the various conditions that may be met with, allow me to read you the notes of a case which occurred during the last few months.

The patient, a girl, 15 years of age, began to have pains about the loins and lower parts of the abdomen which suggested the onset of menstrual life. No sign of blood made its appearance but as the pains recurred about once a month the mother of the girl adopted various measures of treatment, such as sitting the child over hot water, hoping to assist the flow. The girl felt quite well in between these attacks, but after nine or ten months, as there was still no flow, the mother called in Dr. X. and subsequently his partner, Dr. Y. They examined the girl, discovered a bulging imperforate hymen, and correctly diagnosed concealed menstruation. They consulted a modern text-book with regard to the treatment of so rare a case, where they read that the retained menses should be let out gradually by making a tiny puncture through the imperforate hymen. The book spoke of the danger of letting out the fluid suddenly—namely, contraction of the uterus with regurgitation along the tubes of retained menses, into the peritoneal cavity. So on Nov. 22nd, 1904, they applied some cocaine and with antiseptic precautions made a tiny puncture through the bulging membrane. At once a thick, black, treacly, but non-offensive fluid began to escape and continued to escape until, in all, it was calculated, about two pints came away during the following few days. Before the puncture was made the girl had been quite healthy and well. But in two or three days she began to get ill and feverish and the still flowing menses became offensive. Obviously they had become septic and were decomposed and the girl was in a sapræmic condition. So a week after the first puncture—namely, on Nov. 29th—cocaine was again applied to the hymen and with antiseptic precautions a free incision was made and the uterus and vagina were washed out with sterilised water, the contents being very foul. During the introduction of the nozzle of the syringe it was discovered that the uterus and vagina formed practically one cavity, so that it was not easy to find any part of the wall where one could say the vagina ended and the uterus began. In other words, it was quite clear that it was at least a case of hæmatocolpos and hæmatometra. For a short time the patient seemed to be a little better but she rapidly grew worse after that, with signs of septic peritonitis.

Receiving an urgent telephonic message on Dec. 2nd from Dr. Y., I went at once and saw the patient with him. It was quite clear that she was suffering from septic peritonitis, although there was then no offensive discharge because douches of tinctura iodi, one drachm to the pint, had been given frequently. The pulse was over 120, the temperature was 101° F., the face was pinched and anxious-looking, the tongue was dry and brown, and the abdomen was distended and tender all over, but more especially in the lower half. Nothing but an abdominal section offered any hope of recovery and one could not promise that even this would assuredly save the patient's life. Fortunately, her parents were sensible people, and whilst consenting to have the operation done they, more especially the mother, wished to have it done at home. The objection to this was that the surroundings were not favourable to an abdominal section of that kind. The advantages of having it done in a surgical home where we could have a brilliant light right over the table to illuminate the area of operation, a table arranged so as to put the patient in the Trendelenburg position if need be, together with all modern devices for the attainment of as perfect an asepsis as possible and with skilled nurses accustomed to abdominal section cases, quite outweighed the slight inconvenience of the removal. It was said that the patient herself would object but on placing it before her she consented on one condition—namely, that she should retain the services of her nurse, to whom she had become greatly attached—a thoroughly trained nurse who proved to be most efficient and trustworthy.

The patient arrived at the nursing home about three hours after I first saw her and in the meantime everything had been prepared for immediate operation. She was first placed in the lithotomy position and the vulva was shaved and made aseptic as far as possible. The opening which had been made in the hymen was found to be rather small and so it was enlarged by incising the hymen on each side to its base. On vaginal examination it was found that it was possible to pass the finger through the patent cervical canal and that the cervix uteri had become differentiated from the vagina. But the lips of the os uteri were flush with the vagina all round; in other words, there were no fornices. One could feel, also, that there was something in the region of the pouch of Douglas and also in the pelvis at the sides but only a very gentle examination was made. The cavities of the uterus and vagina were now swabbed out with formalin lotion, 1 in 500, and finally they were both packed with iodoform gauze wrung out in the same lotion. She was next placed in the dorsal position for laparotomy.

As soon as the abdomen was opened by a median incision

an exceedingly foul, watery fluid escaped and on dipping the fingers into the pelvic cavity stinking pus welled forth through the opening. A mass as large as a man's fist was felt lying behind and to the right of the uterus and on lifting it out, which was easily done as there were no adhesions, it proved to be the right Fallopian tube greatly distended, which will now be passed round for your inspection. This was removed after transfixing and ligaturing the broad ligament in the usual way. Before proceeding further the pelvic cavity was washed out with saline solution (two drachms to the pint), many quarts being used. The stench was almost overpowering and as several sloughy-looking pieces, probably of decomposing clot, escaped, some large jugsful of the saline fluid were poured into the pelvic cavity so as to create a sudden and powerful flush of water. Lying on the back of the uterus, the bottom of the pelvis, and here and there on the intestines, there were large flakes of wash-leather-like lymph and the peritoneum generally was red and inflamed. Finding that more stinking fluid kept flowing down from amongst the intestines above it was determined to try the almost impossible task of cleaning the peritoneum generally, for it was a case of life or death and it seemed that the only chance for the poor girl was to get rid of as much as possible of this stinking stuff. With a Tait's metal tube fixed at the end of thick rubber tubing attached to the douche can, the whole of the contents of the abdomen, diaphragm, liver, spleen, kidneys, stomach, and bowels, were all thoroughly douched with saline fluid, many gallons of which were used at a temperature of 105° to 110° F. When at last the fluid came out sweet the left Fallopian tube was carefully inspected, and although it was swollen and inflamed on its peritoneal aspect and the fimbriæ were swollen, yet as no pus could be squeezed out by rubbing from the uterus towards the abdominal ostium it was determined to give the girl a chance of keeping this important organ. It was quite obvious that we must have drainage, the only question being whether to make an opening through Douglas's pouch and to drain per vaginam or to put in a Keith's glass tube and to drain through the abdominal wound. Not being quite sure as to the aseptic condition of the vaginal walls and Keith's glass tube being a quicker and simpler means I used one and sewed up the wound and got the patient back to bed as quickly as possible. The operation lasted over an hour altogether and the pulse was 140 at the finish. Coffee and brandy were administered in the form of enemata every four hours at first and afterwards every six hours. A morphine injection, one-third of a grain, was given subcutaneously the same night. Fluid was sucked out of the tube every half hour. On the next day the fluid drawn off by the syringe was foul again and also purulent. So a solution of sulphurous acid (50 per cent.) was used to syringe into the pelvic cavity through the glass tube, the fluid being at once sucked out again. As this caused so much burning the strength was reduced to one part of sulphurous acid to two of water. A glass syringe containing about two ounces was used and it was refilled two or three times at each syringing which was repeated about every half hour at first and then every hour. The patient's condition was extremely critical for a few days, but as she took and kept down a fair amount of milk and barley-water, besides retaining coffee and nutrient enemata, there was a little hope that she might possibly pull through.

On the sixth day the glass tube got pushed out a little and the lower end became blocked. Hence it was impossible to suck anything out and inasmuch as before the disturbance of the tube the fluid last drawn had been extremely foul and purulent one could not feel happy about the absence of fluid being a good omen. That the lower end of the tube was blocked became rapidly apparent by a rise of temperature and other evidences of septic absorption, such as quick pulse and dry tongue. The glass tube was turned round on its vertical axis and a probe was passed down to the bottom, very gently of course, but it was quite 24 hours before we succeeded in again reaching the stinking pus. At all events, when it was found and the syringing in of the sulphurous acid got at the septic parts the temperature again fell and the patient improved in every way. The abdomen was somewhat distended, especially at the lower part, and also hard all over, before the operation; and afterwards it became more distended still. But by means of repeatedly passing a rectal tube and by getting the bowels to act by various measures, such as cascara, soap-and-water enemata, turpentine enemata, and the like, we managed to keep it within bounds. On the ninth day she began to take a little solid food and this was gradually increased until she was able to eat well. On the fourteenth day the sulphurous acid lotion was given up and boric acid lotion was used instead. On the seventeenth day the glass tube was removed and an indiarubber tube was put in its place. This was itself replaced by a very narrow one on the twentieth day, and finally a little gauze drainage was employed. The cavity filled up with healthy granulations and the patient got up on the couch on the forty-fourth day. She went home on the fifty-ninth day practically well.

It seemed to me that considering how nearly this girl lost her life through a method of treatment which is known to be dangerous and which ought never nowadays to be adopted, and considering also that her life was saved when in an apparently hopeless condition, that it ought to be brought prominently before the profession in order that no similar mistakes may be made in the future. Concealed menstruation is not a condition often met with. A busy practitioner in a long professional life might not have in his practice more than one or two such cases. This was the very first case Dr. X. and Dr. Y. had ever had to treat and naturally they consulted a text-book on diseases of women which recommended the treatment by puncture. They were thus entirely misled and must be exonerated from all blame. Indeed, many text-books contain the same advice, some giving both methods of treatment—namely, a tiny puncture and a free incision. Scarcely any condemn utterly the plan of letting off a little at a time, although they point out the dangers of it.

But you must remember that some cases appear to do perfectly well when a small puncture is made. Why is that? My reply is that the cases which do well are probably cases of hæmatocolpos only. The danger of letting out the fluid slowly is practically *nil* when the vagina alone is distended. For even if the contents become septic, there is not so large a quantity and the vagina is not so powerful in its contractions as the uterus and it would burst the fragile hymen or its own walls more readily than drive its contents into the uterine cavity. Where, however, there is hæmatometra in addition to hæmatocolpos the danger of making a tiny puncture is very great and it ought never to be done. You all know that the surest means we possess for bringing on uterine contractions in pregnancy is to rupture the membranes. No other method known is to be compared with this for rapidity and certainty. The puncture of the membranes lets out some of the liquor amnii and thus removes the hydrostatic pressure exerted on to the uterine walls. There is an immediate shrinkage of the uterus, followed by more active contraction, resulting in the majority of cases in definite expulsive pains which end in miscarriage or labour according to the time of gestation. The exact physiology of this provocation of uterine contractions has not been settled but precisely the same condition obtains in a combined hæmatocolpos and hæmatometra. Hence, to puncture the imperforate hymen is the very surest way to provoke uterine contractions. These follow one another in ever-increasing volume and force and frequency until, as there is no sufficient outlet through the tiny puncture, the retained menses get driven into the generally patent Fallopian tubes and through them into the peritoneal cavity. If, as in this case, the menses have become septic, which is almost sure to happen after a few days no matter how antiseptically and aseptically the puncture be made, peritonitis ensues and, so far as I am aware, this is the first instance on record where when this has happened the patient's life has been saved by abdominal section.

It is nearly 20 years ago that I lost a case myself through sepsis following puncture of a distended hymen. A post-mortem examination revealed a peritonitis set up by septic menses driven into the peritoneal cavity along the Fallopian tubes. There and then I determined never to adopt that treatment again but to make a free incision and to wash out the whole of the contents from above downwards and so give them no time to decompose. I have operated on a fair number of cases since but have never lost one. The essential factor has been the free incision and the rapid washing out, but during the 20 years, of course, various improvements have been made in regard to asepsis. The fully developed method may be described as follows. The patient may be anæsthetised or not, as the case may be, but in all the cases I have treated an anæsthetic has been given. The vulva is rendered aseptic as far as possible, especially

the generally bulging imperforate hymen. After shaving and washing with soap and water and then by a 2 per cent. solution of lysol it is a good plan to apply a piece of sterilised gauze or other material soaked in 1 in 1000 perchloride of mercury or an equivalent germicide to the bulging hymen, leaving it to soak for not less than two minutes. A two-quart douche can is filled with either a mild antiseptic lotion or with boiled water, to which may be added one or two teaspoonsfuls of common salt to the pint. It should be placed at a good height—i.e., several feet above the patient—and should be connected to the delivery pipe by means of an asepticised elastic tube half an inch in diameter. The delivery tube should be from 12 to 14 inches in length and should have a good wide bore opening at the end. The old-fashioned gum-elastic tubes which were formerly used for the intra-uterine injection of perchloride of iron in cases of post-partum hæmorrhage are first rate. They are preferable to nozzles having small openings at the sides. What you want here is a good stream to flush out the cavity quickly and there is no risk of air getting into the veins, for there are no open veins for it to get into. Moreover, you practically avoid air getting in by turning the tap and allowing the fluid to run out a little before introduction. The temperature of the fluid should be about 105° F. As soon as everything is ready a good incision is made right across the bulging hymen. This can be done by a knife or cautery or scissors. It is a good plan to seize the lower cut margins with catch forceps and to let these hang down; they stop bleeding and keep the vaginal orifice open. The nozzle of the douche apparatus is then rapidly passed through the incision to the top of the uterus and the two quarts of solution are allowed to flow rapidly and with force so as to wash the whole contents from above downwards, out through the opening made. If the returning fluid be still red, as it probably will, when the two quarts are nearly exhausted the douche should be filled again with more saline solution, a plentiful supply of which should be ready. This washing out should be carried on until the returning fluid is clear. The uterine and vaginal cavities can now be packed with gauze, aseptic or antiseptic, but of recent years I have contented myself with passing into the vagina only a little iodoform gauze wrung out in formalin 1 in 750. This can be left in for 48 hours and then removed and a douche of saline fluid or boric acid lotion can be given and a little fresh gauze tucked into the vagina. This gauze acts as an antiseptic and aseptic cork preventing ingress of germs from without as well as acting as a drain. Since adopting this method I have never had a death and indeed never any trouble; the patient has usually made an excellent recovery without rise of temperature though generally with some pains due to uterine contractions.

Of course, when the bulging hymen is incised there is an immediate flow of the viscid dark fluid and doubtless there is an immediate shrinkage of the distended cavity; but the incision is so large that the pressure brought to bear by this shrinkage drives the menses through this opening easily, thus preventing any danger of its being driven along the Fallopian tubes where resistance is much greater. It might be argued by some, "Why not make a free incision simply without washing out?" My own opinion is that such a method might succeed every time. Certainly it would be far superior to merely puncturing. But obviously it would take some time for the uterus and vagina to expel *all* their contents and as these contents are liable to easy infection and decomposition it is better to get rid of them as rapidly as possible so that the uterine and vaginal cavities contain practically nothing that is capable of decomposition. Some prefer to wash out more gradually and more gently on the supposition that a too rapid emptying of the uterine cavity might lead to trouble through uterine contractions disturbing adhesions caused by past perimetritis; such ideas are purely theoretical and if trouble is going to arise on account of uterine contractions it will not be prevented by a slow, in preference to a rapid, washing out. The advantage of the rapid method is that all the retained menses are got rid of before there is time for infection and decomposition and before there is time for the strong uterine contractions to commence.

If, however, it should ever come before you to have to deal with a case of acute peritonitis set up by regurgitation of septic fluid along the Fallopian tubes into the peritoneal cavity the only chance for the patient is abdominal section, removal of the offending blood and, if need be, one or both tubes, and a thorough washing out of the peritoneal cavity. Anyone who has tried to wash out the abdominal cavity thoroughly knows what an extremely difficult thing it is. Pools of stinking pus seem to exist here and there amongst the small intestines after one has apparently got the whole cavity clean. In this particular case, knowing that the more thoroughly the purulent and most offensive fluid was got rid of the more likely the patient would be able to pull through, I set deliberately to work to accomplish the task of cleaning the peritoneum. With this purpose the nozzle of the tube was guided up between the liver and the diaphragm, between the spleen and the diaphragm, round and about both kidneys, and over the stomach and intestines, separating the coils of small intestine here, there, and as far as possible everywhere, in order to direct a rapidly flowing stream of saline solution upon every part of the abdominal cavity. Of course the pelvic contents received the greatest amount of douching and by the time this had been finished there was no pus in, and no offensive odour from, the out-flowing water.

During the operation I was in doubt whether it would be best to remove the left tube as well as the right but as it was only swollen and contained no pus apparently it was decided to leave it. Another point was whether it would be better to make an opening through Douglas's pouch and so to drain into the vagina. Possibly that would have been the best plain but drainage through the abdominal wound by means of a Keith's glass tube was decided upon partly because it could be done much more rapidly and the patient's condition was serious, rendering every minute of value, and partly because the vaginal walls were themselves probably far from aseptic. When the glass tube became blocked and signs of sepsis arose it was felt that perhaps it would have been better to have had a drain through the vaginal roof. And, indeed, had we been unable to get the drainage-tube clear an opening would have been made through the posterior fornix into Douglas's pouch. Happily, however, the tube was freed of its obstruction and so drainage was re-established. The patient's life was saved and that must be remembered in any future case where the question of abdominal or vaginal drainage is discussed. All who were present at the operation thought that it was impossible for the girl to recover. The whole peritoneal cavity was affected by peritonitis and the stinking purulent fluid bathed the entire abdominal contents. But it must be admitted that an infection accompanied by fœtor is less virulent as a rule than some infections which are quite free from bad odour. Take for example puerperal septic infections. That form in which the lochia are offensive is nearly always recovered from, whereas the fatal cases have as a striking clinical feature scanty sweet lochia.

Again, in suppurative fatal peritonitis there is practically, as a rule at all events, no fœtor present when the abdomen is opened. Hence one felt in this case that if the whole or at all events the bulk of the septic stinking fluid could be washed away the vital forces of the patient might be able to battle successfully with the remainder. And happily this proved to be the case. All text-books tell you of the dangers of letting out retained menses—namely, rupture of the Fallopian tubes and sepsis. Some recommend a preliminary abdominal section to find out the condition of the tubes, a method of procedure with which I disagree. But since adopting the method of free incision followed by free washing out of the whole uterine and vaginal cavities I have had no bad result, so that one may say that practically the element of danger from sepsis can be eliminated. Certainly I know of no method for preventing sepsis if a tiny opening only be made in the atresic portion.

As regards the danger of rupture of an already distended tube it seems to me greatly to be exaggerated. Personally I have never come across such a case, and even if it did rupture the contents are nearly always aseptic and would lead therefore to no dangerous peritonitis. And as to hæmorrhage from the ruptured walls of the tube it would be slight and not enormous as in the case of ruptured tubal gestation because, of course, there would be no chorionic villi or placenta. So far as I have been able to refer to text-books on diseases of women not one tells you what to do in case a septic peritonitis supervenes upon the treatment of a case of concealed menstruation by puncture or incision of the atresic hymen or other part. It almost appears as if it were considered a hopeless and an irremediable state for which there was no remedy. I trust that the publication of this case may lead in the first place to an abandonment of the treatment by puncture, and in the second place to the adoption of the

treatment by free incision and washing out, and finally in cases where peritonitis supervenes to an immediate laparotomy with thorough cleansing and drainage.

The following report has been drawn up for me by Mr. H. T. Hicks, obstetric registrar and tutor at Guy's Hospital. "The specimen consists of the right Fallopian tube and its corresponding ovary, covered and bound together with firm but recent adhesion. The uterine end of the tube is free and from this point the tube curves outwards and downwards and embraces the enlarged ovary in the concavity of its curve. The ovary is uneven on the surface and covered with a thick layer of lymph and in its interior is a small abscess cavity which contained thick pus. The walls of the tube are much thickened and in a condition of interstitial salpingitis while the lumen of the tube is dilated and tortuous. The mucous membrane is œdematous and in the recent state the tube contained a dark chocolate-coloured material mixed with pus resembling breaking-down blood clot. The dilated tube has been infected by an acute septic organism which, passing quickly along to the fimbriated end, has secondarily infected the ovary, forming a small abscess in its interior and peritonitis around. It is interesting to note the great thickening of the muscular coat of the tube as well as the peritoneal coat. The sections show that both the muscle and the mucous membrane are in a condition of acute inflammation with much small-cell infiltration."

The Lumleian Lectures

ON

NUTRITION AND MALNUTRITION.

Delivered before the Royal College of Physicians of London on March 28th and 30th and April 4th, 1905,

BY W. H. ALLCHIN, M.D. LOND., F.R.S. EDIN.,

FELLOW AND CENSOR OF THE COLLEGE; SENIOR PHYSICIAN TO THE WESTMINSTER HOSPITAL.

LECTURE II. *(concluded).*[1]

Delivered on March 28th.

THE RÔLE OF OXYGEN IN TISSUE METABOLISM.

IN the course of these complicated changes, both anabolic and katabolic, the part played by oxygen is necessarily of considerable importance. The problem was the subject of an interesting discussion introduced by Sir John Burdon Sanderson at the last meeting of the British Association for the Advancement of Science. That it is a potent factor in those changes which constitute the disintegration of such tissues as muscle and nerve-centre in connexion with the manifestation of their specific energies has long been a commonplace of physiology and the resulting products of oxidation, such as carbonic acid and water, were known to be proportionate to the work done. More recently it has come to be realised that oxygen plays an important part in the constructive phases of living matter, though precise information on the point is still to seek. So far, however, it appears that for the restitution of the living molecule after the disintegration attendant on its transition from an inactive to an active state oxygen is essential, "not as an oxidiser, but as a restorer of functional capacity." It is requisite that the element should become a part of the bioplasm—intramolecular—whereby the excitability of the tissue—muscle or nerve-centre—is increased, and the response to a suitable stimulus, as expressed by the disintegration of the living substance with liberation of energy, is induced. It is in this latter phase that the oxidising function of the oxygen comes into play, contrasting with its integrating function that renders possible the explosion. For this anabolic capability Sir John Burdon Sanderson suggests the term "oxygenation." Both in muscle and nerve-centre oxygen "acts as a predisposing, not as an exciting, cause of functional activity," though playing an active part in the katabolism of these tissues. In the case of excretory glands the rôle of oxygen appears to be different, for during the activity of these organs, so far as it has been observed in the salivary glands, the pancreas, and the kidney, there is a large increase in the intake of oxygen without the subsequent liberation of a corresponding amount of carbonic acid. It is then the anabolic action of the element which predominates in glands, as the katabolic does in muscle and nerve-centre. This difference in the part played by oxygen in the muscular and nerve tissues (grey matter) and in the secreting glands is further shown by the far greater production of heat which takes place in muscles and the greater the excretion of carbonic acid and water the greater the amount of muscular work. Although oxidation is so important a factor of katabolism it is not to be maintained that all the disintegration stages of the tissues (body-stuffs) are of this nature. The most complex—viz., the proteids—would seem to undergo certain preliminary decompositions in which oxygen plays no part; the splitting of these substances into a nitrogenous and a non-nitrogenous portion which may or may not be converted into sugar is an illustration. Some of the first products of proteid (muscle) metabolism are doubtless oxidised at a later stage, but, as already said, the katabolism of proteids is not one of complete combustion, as it is in the case of fats which are entirely converted into carbonic acid and water, and as is also the case with much of the carbohydrates unless the greater part of these substances are converted into fat before oxidation, a fraction only being involved in the proteid synthesis.

The tissues differ among themselves very much in the extent to which they are possessed of oxidative power, and Loeb has shown that the solubility of certain substances in the tissues is affected by the presence or absence of oxygen. How important this is in respect to the chemical interchanges between the cell and the materials presented to it will be obvious.[2] There is much to show that the oxidations mostly take place in the nucleus of the living cell, which consequently becomes the chief seat of the syntheses that depend on these oxidations.[3]

THE PART PLAYED BY FERMENTS IN NUTRITION.

On looking over the whole series of changes, which I have merely indicated in outline, undergone by the ingesta from their first contact with the digestive secretions and their subsequent absorption to their final presentation to the living protoplasm and their assimilation and breaking down, we are led to recognise that these changes are, so far as they are known, exactly of the nature of well-known chemical processes. By hydrolysis or decomposition with previous hydration, by condensation, by oxidation, and by reduction, the various alterations in the food-stuffs are effected. Now these processes are precisely such as take place in our laboratories under experimental conditions and, indeed, many of the changes which I have described as occurring in the carbohydrates and fats and to some extent even in the proteids can be imitated at will in our flasks and test-tubes. But there is this great difference: that in our laboratory procedures to bring about these results strong acids or alkalies are required, a prolonged application of high temperatures or electric currents of great potentiality—conditions which obviously do not exist in the living animal or plant and that, indeed, would be destructive of it. On the other hand, in the simplest living cell, alike as in the highest form of existence, these same changes are effected rapidly and surely without any such powerful agencies. It is this marvellous accomplishment of chemical change, both synthetic and analytic, that characterises the living organism and that permits us to use with becoming understanding the expression "vital" as applied to them, though it may well be that such a term is provisional only and may not be taken to affirm an essential difference from those conditions which govern non-living matter. At the same time, it must be admitted that altogether fresh methods of chemico-physical action are disclosed by the investigation of the syntheses effected by the living organism and are not identical with those which take place in our laboratories.[3]

If now we seek for some explanation of the means by which the living thing effects these series of ascending and descending changes—the anabolic or constructive as well as

[1] Lecture I. and the first part of Lecture II. were published in THE LANCET of April 29th (p. 1111) and May 6th (p. 1180) 1905, respectively.

[2] R. S. Lillie: American Journal of Physiology, 1902, vol. vii.

[3] "The testimony of pure chemistry cannot, *as it at present stands*, be legitimately interpreted into a direct negative of vitalism in any form. This negation may, and probably will, be made possible in the future when our chemical methods have been made to approximate more closely to the vital methods" (The Chemical Synthesis of Vital Products, by Professor Meldola, F.R.S., 1904.)

the katabolic or destructive phases of metabolism—we find some clue in the conclusions drawn by numerous workers who have approached the problem from various points of view, starting not infrequently from previous knowledge that gave but little indication of the comprehensive and far-reaching results to which it has led. For many years it has been known that the activity of the several digestive secretions depends on the presence of bodies known as soluble ferments or enzymes, ptyalin, pepsin, trypsin, lipase, and the like, though but little had been ascertained as to the actual nature of these bodies, far less of their mode of action. Extended observation has demonstrated a wide-spread existence of these agents throughout the tissues, both animal and vegetable, and has shown not only that they are secreted from the cells in which they are formed and so enter into the specific secretions of the various secreting glands, but that they also may occur within the cells themselves and exert their peculiar activities in that situation—intracellular ferments. Among other consequences of this increased knowledge of these agents is to abolish the distinction hitherto maintained between the so-called inorganic and soluble ferments and organised or living ferments, of which the yeast plant may be taken as a type, since from this organism a substance has been expressed that brings about all the changes in the carbohydrates which the living cells themselves produce. Great difficulty has been experienced in obtaining these bodies in even approximate purity and so far their real nature and mode of action are largely hypothetical. There seems, however, good reason to believe that in many cases they are of the nature of nucleo-proteids and are derived from the chromatin of the cell nuclei[4] but that between this substance and the enzyme are intermediate stages which are successively formed in the cell substance or cytoplasm, the immediate precursor of the ferment being known as zymogen. Their activity is largely conditioned by their environment; they are destroyed beyond certain limits of temperature and according to the degree of concentration of the medium in which they are will be in great measure the character of their results. The dependence of the formation of trypsin by the pancreas upon the circulation in the gland of a specific substance secretin and the further formation of trypsin from the zymogen by the action of another ferment (enterokinase) already referred to, seem to indicate some of the conditions of the origin and mode of action of these bodies concerning a knowledge of which we are but on the threshold. Their action is inhibited by the accumulation of the products of their activity, a removal of which permits a renewal of their effectiveness. Moreover, it appears to be pretty clear that for the due production of the specific changes which these enzymes induce the cells must be adequately supplied with suitable pabulum and what is of great importance the actual variety of ferment action depends very considerably upon the character of this pabulum, so that the same cell may give rise to different ferment actions. The adaptation of the gastric and pancreatic secretions to the particular requirements of different articles of diet previously alluded to serves to illustrate this statement. It was an investigation of this point in particular that led Croft Hill to the discovery of the reversibility of ferment action. The hydrolysis of starch into glucose by diastase has long been familiar to us and it was also known that long before the whole of the starch was converted the action came to an end if the resulting sugar were not removed; if now glucose be added to the mixture a reconstruction of starch takes place, the enzyme rebuilding the molecule it had previously split up. It is difficult to over-estimate the importance of this discovery, advancing as it does so distinctly our conceptions of the intimate nature of living things. Within the unit of living matter we now conceive as existing numbers of these ferment bodies ceaselessly effecting series of katabolic and anabolic changes. Immersed in the several bioplastic constituents of the cell which are simultaneously undergoing both destructive and constructive changes, they bring about these decompositions and compositions determined in the direction of their activity by the relative proportion of the products to which they have given rise. Only when the breaking-up products (conveniently designated by Croft Hill kata-products) balance those of construction, or ana-products, is the activity of the cell in abeyance. "If either the ana-products or kata-products are removed from the sphere of action as fast as produced the other products will be entirely transformed. In this way the reversibility of ferment action is sufficient to explain the synthetic processes of life which may, and probably do, occur in stages, so that the ana-products of one ferment are the kata-products of another, the final ana-products usually having a very low solubility."[5] The reversible action of lipase in the disintegration and integration of fats in the course of digestion and absorption which has been previously mentioned is an illustration of this point. From this it would be clear that the older notions that ferment action was solely in the direction of decomposition, of katabolism, must be amended and their efficiency as synthetic agents be recognised. And not only is this apparent in the manifestation of their reversible action but it is to be observed between different ferments which thus become, as it were, complementary to each other. Thus the glucoside amygdalin which is extracted from almonds may be broken up by one ferment into sugar, hydrocyanic acid, and the essence of bitter almonds, whilst another ferment obtained from yeast extract can reconstruct these substances into the original compound.

Much has been said as to a constructive and destructive power of the living protoplasm as distinct from that of the enzymes which are formed from certain constituents of the protoplasm. The nature of these metabolic processes is in both cases the same and it seems probable, though it cannot be affirmed, that it is by these specialised portions of the living matter, these extremely complex bodies the enzymes, that the synthesis of the pabulum into the bioplasm is effected, and that so soon as this takes place by similar ferment action a decomposition is brought about "giving rise to many residues of various kinds, some of which are re-incorporated with new material into the molecules of the bioplasm, while others are broken down still further and ultimately eliminated." "Not only," continues Professor Reynolds Green,[6] "does the substance of the protoplasm itself undergo these decompositions, but different materials in the cells are involved in them and the residues of these are absorbed into, and incorporated with, the living substance in the same way as those which spring from its self-decomposition. We find that in many cells there is stored a reserve of nutritive material, not quite in a suitable state for immediate assimilation, but ready to form a nutritive pabulum when split up. Nor are such materials of use only as supplying nutritive material; by their decomposition a supply of energy is afforded to the protoplasm, of which it avails itself in carrying out constructive processes."

Many are the theories that have been advanced to explain the mode of action of these ferment bodies, but no one can be said to be completely satisfactory. The resemblance in their effects of setting up or accelerating chemical changes in substances, apparently without undergoing any material change or loss themselves, at once suggested a strong resemblance to similar activities long known to be possessed by certain metals, such as platinum, gold, and silver when in a state of fine subdivision or in a colloidal (spongy) form. Such power was called catalytic, although no explanation is afforded by the term. A point of exceeding interest in reference to this is that many of the fermentations which we recognise as dependent on the action of enzymes, such as the oxidation of alcohol into acetic acid by the vinegar plant, may be effected by finely divided platinum, by which also cane sugar may be inverted, and, as lately shown by Neilson,[7] the hydrolysis and synthesis of fats, which in the body take place by the action of a ferment lipase, may also be brought about by mere contact with platinum black. So also such toxic agents as prussic acid will equally arrest the action of the cell-formed enzyme and of the metal. So wide is this ferment

[4] "This hypothesis," says Professor Reynolds Green, "is considerably strengthened by the observations of Macallum (Contributions to the Morphology and Physiology of the Cell, Transactions of the Canadian Institute, I., 1890), by whom the nucleus has been shown to initiate the process of secretion, and to excrete some material into the cytoplasm which then undergoes further changes and ultimately enters into the composition of the zymogen if it does not actually form the principal part of it. The source of this excreted material is the chromatin of the nucleus. Macallum has also shown how intimately phosphorus is associated with zymogen from its inception in the nucleus till the time when the granules are fully formed."

[5] Crofts Hill: Thesis for M.D. degree, University of Cambridge.

[6] The Soluble Ferments and Fermentation, by Professor Reynolds Green, D.Sc., F.R.S., 1901, p. 363.

[7] American Handbook of Physiology, 1904.

action, by which the various synthetic and analytic processes are performed, that within recent years a group of ferments has been recognised which are concerned in the transference of oxygen to the substance undergoing "fermentation." To these oxidising enzymes the name "oxidases" has been given and their presence has been detected in both animals and plants. Here, again, is seen a familiar chemical process which in our laboratories is effected by means of considerable heat or of such reagents as would be destructive of living tissues, carried out rapidly and quickly through the agency of these highly complex bodies which are present only in infinitesimal quantities. The first of these bodies to be detected now more than 20 years ago is one known as laccase, by which the lacquer varnish is produced; others appear to be concerned in causing the bouquet of wines; another takes part in the formation of indigo; and yet another, found in ripe olives, in the oxidation of the oil into oleic, acetic, and other acids. Recent observations by the committee of the British Association for the Advancement of Science previously referred to upon the localisation of these oxidases within the cells have shown that they are not components of the living framework of the cells but are dissolved in the fluids that bathe that framework and circulate in the cell spaces and cavities. And in view of the relation which these fluids have to the surrounding media it may be more correct to regard these bodies not as enzymes but rather as oxygen carriers very much as hæmoglobin is. The observation that certain animal tissues have reducing properties, such as being able to convert alkaline nitrates into nitrites, has suggested the possible existence of enzymes which could obtain the oxygen from somewhat stable compounds instead of from the atmosphere—in fact, reducing ferments.

Until quite recent years the function of a number of organs in the body known as the ductless glands, thyroid, parathyroids, thymus, adrenals, and pituitary body, was a subject of profound mystery. Chiefly as the result of clinical observation alterations in their structure were found to be associated with very widespread tissue change and general functional deterioration in various directions. Without wholly excluding the idea that these organs may be partly concerned in the withdrawal of some toxic products of tissue waste their influence on metabolism is attributed to the formation by them of internal secretions which are thrown into the blood or lymph circulation and so distributed to the body. The next step was to ascertain that this function of internal secretion is also possessed by some of the glands that furnish external secretions and possibly also by other structures with which glandular functions, as ordinarily understood, are not usually associated. That these organs, or some of them, exert a very important influence on the nutrition of the body is well known. The close association of the development of the reproductive glands with the growth of the body and the consequences of the removal of the thyroid and of the pancreas are familiar to us. In the case of the thyroid it has been demonstrated that when removed or when its function is arrested by disease the nitrogen elimination is much diminished and protoplasmic activity decreased, whilst the reverse condition obtains when the gland or extracts of it are administered. In contrast to this may be mentioned the effects of removal of three-quarters or more of the total renal tissue which is followed, as Dr. J. R. Bradford has shown, by an elimination on the part of the remaining portion of the organ of even more nitrogen than had taken place when both kidneys were untouched. This means an increased nitrogenous metabolism of the tissues apparently excited by the removal of the influence of the kidney, suggesting that this organ produces a something which inhibits, as the thyroid produces something which stimulates, the metabolism. Consistent with our general state of knowledge we are led to suppose this something is of ferment nature and that the internal secretions owe their activities to bodies of this class. Inasmuch as the normal influence of these organs is to promote oxidation and perhaps oxygenation in the sense just now defined it may be that a specific use of these organs is to furnish oxidising ferments to the economy. Important as is the integrity of these organs for the general well-being of the individual the range of their influence is far from being fully known and it is very uncertain how far the results of experiments in connexion with them conducted on the lower animals are applicable to man. There appears also to be some mutual relation in action among these organs, of which at present we have but only suggestions. Thus, for instance, the thymus ordinarily begins to atrophy when the sexual glands are becoming mature and castration in young animals (cattle, guinea-pigs, and rabbits) arrests the wasting of the thymus which continues to grow.[8] Dr. D. Noel Paton,[9] reversing the experiments and removing the thymus, was led to conclude that "there is a reciprocal action between thymus and testes, each checking the growth of the other." Similar relationships have been observed in respect to other organs. If, as is supposed, the effects on nutrition of these organs is an expression of ferment action it would seem that these ferments require for the manifestation of their activity the presence or absence of other like bodies, some being helpful as others are antagonistic.

THE RELATION OF LYMPHOCYTES TO NUTRITION.

In the consideration of the various factors engaged in maintaining the nutrition of the tissues mention must be made of one, the mode of action of which is not understood in anything like completeness, even if the suggestions which have been made so far are correct. It is well known that among the normal white corpuscles found in the blood are some characterised by a non-granular hyaline appearance, with a single large round nucleus, which are known as lymphocytes. Of these, there appear to be two varieties which differ chiefly in size. Ordinarily the proportion of these cells is about 25 per cent. of the leucocytes, but during the process of digestion it is found that this proportion is very much increased, subsequently to fall again to the before-mentioned number. So constant is this digestive lymphocytosis that it is impossible to avoid the conclusion that it is in some way connected with the digestive process itself or with the materials that result therefrom. It is in playing some part in the absorption of fats that the activity of the lymphocytes is assumed to lie, conveying it when digested from the columnar epithelial cells to the radicles of the lacteals. As in a measure confirming the nutritive importance of these cells is the undoubted fact of their greater number normally in the blood of children—at a time of life, that is, when the nutritive demands are greatest. And further, the greater activity of the adenoid tissue whence these cells are derived during infancy and childhood becomes even still greater in circumstances of impaired nutrition, as if by the increase in lymphocytes an effort was made to meet the deteriorating influences. It has been noticed that the diminution in the proportion of these cells to that which is characteristic of the adult occurs at about the time that the function of the thymus begins to subside. Neither the thymus nor the spleen, which together comprise the largest amount of lymphoid tissue in the bodies of young animals, however, appears to be essential to nutrition, for either or both have been removed without interfering "with nutrition, blood formation, growth, and development of the animal."[10] The subject is one of which we really know but little.

THE INFLUENCE OF THE NERVOUS SYSTEM ON NUTRITION.

There is yet another factor which requires to be taken into account when endeavouring to form anything like a complete conception of the processes of nutrition. In the progress of organic development, as the tissues and organs become differentiated and the functions specialised, there arises a demand, which grows with the increasing complexity of the organism, for some regulating, coördinating, and harmonising mechanism whereby the activities of the separate parts shall be combined most advantageously for the common good, to effect that union of action among the different organs as shall manifest most economically the life of the individual and most completely bring the organism into relation with its surroundings. This complex of functions is performed by the nervous system. I scarcely need stay to furnish you with examples showing the influence that the nervous system has over the nutrition of the separate tissues and organs or of the body as a whole. In health the existence of this function is assumed, but that some such influence really is present is apparent from certain morbid phenomena which are associated with its perversion, and in many cases also with an obvious structural lesion of the nervous apparatus. The well-known distribution of certain cutaneous eruptions in special nerve areas and the frequent morbid change found in the associated nervous tissue, such as herpes zoster, morphœa, "glossy skin,"

[8] J. Henderson, M.R.C.V.S., Journal of Physiology, 1904.
[9] Ibid.
[10] Paton and Goodall: Proceedings of the Royal Society of Edinburgh, 1904.

sclerodermia and others, atrophy of muscles and bones, bedsores and perforating ulcers, are but a few of the local results that we connect with a removal or perversion of this trophic influence due to disease of nerves or of nerve centres. There are other states of malnutrition in which there is a more general wasting but with which no special nervous change hitherto has been detected. Such an one is the condition known as *anorexia nervosa*, in which a universal and profound disturbance of the general nutrition is brought about, coupled with an almost complete abstinence from food. The degree of emaciation, however, far exceeds what occurs in professional fasters but is nevertheless compatible with an often remarkable degree of muscular vigour. It does not follow, however, that there are special neurons concerned with the discharge and conveyance of trophic impulses only but rather that these are involved in those nervous influences which govern the functions of the various organs and tissues and that "the function and nutrition of these physiological machines form together an inseparable unity" (Sherrington). It is unnecessary to remark that by regulating the blood-supply the nervous system also influences nutrition. It may be conceived that this trophic control may be exerted directly in stimulating the functional activity of the tissues, or, so to say, indirectly, as, for instance, by coördinating the mutual relationship of the tissues, one aspect of which we recognise as the effect of internal secretions, or by controlling that power of adjustment to the environment which is a fundamental property of living matter.

If we attempt to form any conception of how the nervous system affects the processes of nutrition we should consistently with the nature of the function which I have set forth regard it as influencing the chemical processes within the cells. Direct structural continuity between the nerve fibrils and the protoplasm of many glands and muscles has long been known to exist, which shows at least the possibility of the nervous impulses immediately affecting the equilibrium of the cell. And, further, having regard to what we know of the nervous influence over the secretion of certain glands, we should not probably be far wrong in assuming that the anabolic and katabolic phases of nutrition are capable of being separately excited, though not necessarily by separate nerves. The increased and diminished action of the heart induced by stimulation of the sympathetic and vagus nerves respectively have been regarded by Gaskell as the result of the setting up of katabolic and anabolic processes in the cardiac muscle by these nerves, which, if a correct explanation—and there seems no reason to doubt it—illustrates the conveyance of synthetic and analytic stimuli by separate nerve paths. The mutual relation of the up-grade to the down-grade changes in the living cell and their continuous activity would presuppose an equally continuous emanation of nervous impulses from the cells of the centres governing nutrition, and that there is such a constantly passing influence has been maintained by Sir William R. Gowers[11] and others.[12]

THE RELATION OF IONS TO VITAL ACTIVITY AND NUTRITION.

So far I have traversed ground that is in the main well assured, indeed that in great part is familiar; and though there are many missing links in the chain of progressive changes which I have indicated to you there seems good reason to believe that those links will be discovered and that without any considerable upsetting of our present-day conceptions. The ascription to ferment action of the essential phenomena of nutrition does but give clear expression to many vague surmises that have long been held and the fact that the intimate nature of these substances is but most imperfectly known, or indeed their actual isolation but scarcely attained, does not warrant our refusing to regard them as the important factors that they are generally assumed to be. Nor should the simplicity of the idea lead us to reject it. To ascribe the wonderful series of changes that build up that marvellous material bioplasm with all its potentialities out of materials whose composition is for the most part well known, to these ferment bodies, to realise that these agents are capable of a reversible action largely due to the character of their environment, in short, to regard life as a series of fermentations brought about by the progressive and harmonious interaction of these enzymes, though it may not be the ultimate explanation of vitality, helps us one step further towards its realisation and does so in accordance with well-established data. But having gone so far, having acquired, so to say, another foothold from which to make further advance, speculation seeks for some means of explaining how it may be that the living matter liberates its activities which are thus regarded as dependent on ferment action.

Many years ago a Fellow of this College, Dr. S. Ringer, working with portions of contractile tissues, cilia and muscle, immersed in solutions of various substances, showed that the tissues continue to exhibit their contractility in certain solutions and not in others, the most suitable being a solution of salts similar to those found in the blood plasma. The real significance of these observations was not apparent and for a time they appear to have been lost sight of until the subject was a few years ago further investigated by Professor Loeb, formerly of Chicago and now of San Francisco. He found that the contraction is not manifested when the tissue is surrounded by solutions of such substances as urea, sugar, and albumin which are not electrolytes and that different contractile tissues differ in their degree of contractility according to the solution of electrolytes to which they are exposed. By varying the character of the medium he was able to start or arrest, quicken or slow, the action of a heart placed therein and could even make the limb muscle of a frog contract rhythmically like cardiac muscle. He went even further, and investigating that specific form of contractility which is represented by cell fission and that results in growth he found that he could initiate in the unfertilised ova of certain lower organisms by a suitable application of solutions of salts of certain strengths the cell division that characterises fertilisation and that is ordinarily regarded as the response peculiar to contact with the sperm cell. Similarly the irritability of nerve fibres has been shown by Dr. A. B. Mathews, a former colleague of Professor Loeb, to be controlled by the nature of the solutions with which it is bathed. The explanation for these remarkable phenomena, which refer more closely than before the manifestations of life "to their physical and chemical counterparts or analogies" (Burdon Sanderson), is to be found in the ionic theory of solution. In accordance with this hypothesis certain substances when dissolved undergo in the process of solution a more or less complete dissociation into their constituent atoms or groups of atoms, each of which becomes at the same time charged with positive or negative electricity; such electrically charged atoms are termed *ions*. It has been known since the time of Faraday that certain substances in solution through which an electric current is passed between two electrodes immersed in the solution also undergo a similar dissociation and some of the ions are set free at the positive electrode and are therefore regarded as carrying a negative electric change and hence called anions or negative ions; others are liberated at the negative electrode and are, therefore, called positive ions or cations. And those substances which behave thus under the passage of an electric current when in solution also undergo dissociation when entering into solution apart from the presence of a current. It is further found that the weaker the solution the greater is the percentage of dissociation into its constituent ions of the dissolved substance.[13] In solutions, particularly dilute solutions, these ions move freely about among the other parts of the liquid and diffuse through them, just as in a gas the individual molecules diffuse through the mass of the gas. And just as the moving molecules of a gas inclosed in a space tend to set up in that space a pressure upon its walls proportional to the number of them so contained, so the free ions in a liquid tend to set up by their movements during diffusion a pressure throughout the liquid and against the containing walls. If the containing walls be of porous membrane this pressure tends to drive the ions through the pores. This process of passage through the pores is known as osmosis and the osmotic pressure exercised by the ions of any given kind in a dilute solution is proportional to the quantity of the ions present in the solution.

Now, as a rule, the mass of living protoplasm is separated

[11] THE LANCET, May 10th, 1890, p. 1006.

[12] See also papers by Wesley Mills, New York Medical Record, Oct. 22nd, 1887, and New York Medical Journal, Dec. 22nd, 1888.

[13] It is necessary to distinguish between dissociation and chemical decomposition. The ions of dissociation though assumed to be free in the solvent do not manifest their usual chemical properties. Thus NaCl when dissolved is supposed to split up into sodium cations and chlorine anions, but neither of these elements behaves as they would if separately added to water; no decomposition of the water by Na occurs nor is any free Cl detectable by its smell or its bleaching action.

from the surrounding medium as the substance of the nucleus is separated from the cytoplasm by a membrane—cell wall. Whilst this structure may well serve to retain within the cell the cell contents, including zymogens, ferments, and other colloidal bodies, it will readily permit the passage outwards and also inwards of those diffusible substances in solution, which we have just seen in virtue of their solution have undergone ionic dissociation. It is also obvious that the degree of concentration of the fluid with which the cells are bathed and, adopting the terminology of Croft Hill, of the ana- and kata- products of metabolism will very considerably affect the nature and extent of the intracellular changes—that is to say, of the ferment action—that is to say, of the cell activity. The amount of water taken up or lost by a cell will thus influence very materially the direction of its action determining a synthetic or an analytic result.

I just now said that Professor Loeb has demonstrated that muscle varied in its contractility according to the electrolyte with which it is surrounded; thus sodium salts favour contraction as potassium and calcium salts inhibit it, but although this is the action of calcium it is nevertheless found that its presence in very minute quantities along with the sodium salt considerably prolongs the contractility of the muscle; with this circumstance it may be remembered, as suggesting the direction in which these salts act, that though the "influence of calcium is of doubtful value in the production of muscle-clotting or rigor mortis, its presence is most important in blood-clotting and milk-curdling" (Halliburton), all which changes are the result of ferment action upon which it may be supposed the influence of the calcium ions is brought to bear. In these cases the salt solutions are dilute; a concentrated solution of sodium chloride would kill a muscle immersed in it.

As giving some support to this theory of ionic action, Mr. S. W. Cole, as the result of experimental work on the influence of electrolytes on the action of amylolytic ferments,[14] found "that the action is favoured by anions and depressed by cations." This conclusion was justified by finding "that the salts of the strong acids accelerate the action of ptyalin on starch; the accelerating influence being the greater, the greater is the strength (avidity) of the acid. With salts of weak acids there may be a retardation; the more pronounced the weaker the acid is, and especially prominent in salts of dibasic and tribasic acids." Dr. Mathews, also, finding that some salts stimulate as others depress nerve action, attributes the stimulant effects to the action of anions and the depressing effects to positive ions.[15] In confirmation of this it is known that the electrical stimulation of a nerve always proceeds from the negative pole (cathode) on making the current.

Much work has been recently done on the intimate nature of colloids, of which the proteids that form the bulk of protoplasm consist. Constituted of small granules held in solution they are found to be capable of bearing an electrical charge, positive or negative, to be, that is to say, electrolytes, and among these bodies the ferments are to be included. "The salts or electrolytes in general," says Professor Loeb,[16] "do not exist in living tissues as such exclusively but are partly in combination with proteids. The salt or electrolyte molecules do not enter into this combination as a whole but through their ions. The great importance of these ion-proteid compounds lies in the fact that by the substitution of one ion for another the physical properties of the proteids change (for instance, their power to absorb water and their state of matter)." "It is more than probable that one or both of these qualities may account for muscular contractility and protoplasmic motion. The agencies which affect these two variable qualities of the protoplasm are, first of all, certain enzymes. Almost equally powerful are ions in certain concentrations."

Thus, then, the vital activities of the living cells would seem to consist essentially in the formation of ferment bodies which alone or in combination effect those integrations and disintegrations which liberate chemical energy and that this by transformation produces muscular work, nerve force, and secretory function, the fundamental manifestations of life. That these enzymes do bring about these changes in such conditions of temperature and alkalinity or acidity as obtain in the body appears to be certain; and as an explanation of the activity of the bioplasm which elaborates these bodies there is postulated an ionic action on the part of the cell contents and their surrounding medium whereby charges of electricity of variable strength and character are brought into conflict and that from the play of ions the manifestations of vitality result. Such a conception of bioplastic activity leads more clearly to the realisation of the inseparable unity of function and nutrition, and that nutrition in its fullest sense is life itself.

[14] Journal of Physiology, November and December, 1903.
[15] Science, 1903, vol. xvii., p. 729.
[16] Studies in General Physiology, Collected Papers, 1905, Part II., pp. 544 and 622.

A CASE OF "SPLENOMEGALIC" OR "MYELOPATHIC" POLYCYTHÆMIA WITH TRUE PLETHORA AND ARTERIAL HYPERTONIA, WITHOUT CYANOSIS.[1]

BY F. PARKES WEBER, M.D. CANTAB., F.R.C.P. LOND.,
PHYSICIAN TO THE GERMAN HOSPITAL, LONDON.

IN the absence of cyanosis the following case differs from the cases of chronic cyanosis with polycythæmia and splenomegaly recorded by Vaquez, Saundby and Russell, Rosengart, Osler, and others. I have had the advantage of being able to study a typical example of such cases[2] and believe that the present case is really of the same nature but at an earlier stage and occurring in a fairly robust subject whose circulatory system is acting efficiently. I would temporarily include all these cases, with or without cyanosis, under one heading—namely, "splenomegalic polycythæmia," although I think it possible that the spleen need not be obviously enlarged to clinical examination in all cases. In many respects cases of this group, like the present one—that is to say, cases without cyanosis—resemble the case of "hypertonia polycythæmica" (Geisböck) recently recorded by Hess[3] but apparently differ from it in the absence of albuminuria and in the presence of splenomegaly.

The present patient, a Jewish woman, aged 37 years, of medium height and weight, first came under my care in July, 1903, for acute erythromelalgia of the left foot.[4] This condition under rest in bed and other treatment became less acute and finally gradually disappeared. The existence of the polycythæmia was first detected when the blood was examined in March, 1904, but was probably present earlier. From April, 1904, to February, 1905, the patient was constantly under observation in the German Hospital and on April 22nd, 1904, was shown at a clinical meeting of the Clinical Society of London. Owing to the disappearance of the erythromelalgia she is no longer confined to her bed. In fact, the condition for which she originally came under treatment is practically cured, though her other symptoms, objective and subjective, persist, and it is with these that the present paper deals.

There is no distinct cyanosis of the face, though the cutaneous blood-vessels are somewhat overfilled and the tongue is generally of a bright red colour with a bluish tinge resembling the colour of raw butcher's meat. The toes, especially those of the left foot, sometimes appear rather livid, but this is possibly connected with the past erythromelalgia, which, it should be remembered, was not entirely confined to the left foot. No evidence of disease has been discovered in the heart or the lungs. There is no dyspnœa. By examination of the abdomen nothing abnormal can be detected excepting moderate enlargement of the spleen, which can be felt one or two fingers' breadth below the ribs. For diagnostic purposes, owing to a question of the possibility of splenic tuberculosis, Koch's old tuberculin was employed in December, 1904, but the injection of five milligrammes failed to produce a reaction. Menstruation is regular. The bowels are sometimes confined. The urine is usually

[1] A paper read before the Royal Medical and Chirurgical Society of London on May 9th, 1905.
[2] F. Parkes Weber and J. H. Watson: Chronic Polycythæmia with Enlarged Spleen, Transactions of the Clinical Society of London, 1904, vol. xxxvii., p. 115, and International Clinics, 1905, vol. iv., p. 47.
[3] Abstract by Pappenheim in the Folia Hæmatologica, 1905, vol. ii., p. 47. Cf. Geisböck: Verhandlungen der XXI. Kongresses für Innere Medicin, 1904, p. 97.
[4] I described this part of the case in the British Journal of Dermatology, February, 1904, p. 70.

TABLE I.—SHOWING BLOOD COUNTS IN RELATION TO TREATMENT, ETC.

Date.	Hæmoglobin per cent. of normal standard.	Red cells per cubic millimetre.	White cells per cubic millimetre.	Polymorphonuclears per cent.	Small lymphocytes per cent.	Large lymphocytes, large mononuclears, and "transitionals" per cent.	Coarsely granular eosinophiles per cent.	Mast cells per cent.	Erythroblasts (all normoblasts).	Average diameter of erythrocytes.	Diet and treatment.
1904.											
April 13th (a)	120	8,240,000	6000	73·75	17·25	8·5	0·5	Only one seen.	—	—	—
,, 17th	125	9,440,000	8100	—	—	—	—	—	—	—	—
,, 19th (b)	—	8,660,000	9000	77·6	18·5	3·5	0·3	—	—	—	At the end of April, 1904, a milk diet was ordered but was only continued for a few days owing to the patient's objection to it. She was then put on ordinary meat diet and from May 9th was given from two to three drops of liquor arsenicalis three times daily. The arsenic was discontinued on May 30th.
May 30th (c)	165	10,600,000	7200	68·8	26·5	4·0	0·7	—	—	Not greater than the normal.	—
June 12th	170	—	—	—	—	—	—	—	—	Great variety in size noted.	—
,, 20th (d)	148	10,960,000	8800	—	—	—	—	—	—	—	At the end of June, 1904, meat was discontinued, and the diet was made to consist of milk, milk puddings, bread, butter, potatoes, green vegetables, and stewed fruit, with every day two eggs and about twice weekly some fish. From July 8th, 1904, till February, 1905, she took the juice of one lemon daily.
July 8th	175	9,440,000	8400	—	—	—	—	—	—	—	—
August 3rd (e)	148	8,016,000	8000	—	—	—	—	—	—	—	—
,, 15th (f)	177	9,840,000	—	77·0	13·0	8·0	0·4	1·6	Present.	7·48 μ	—
,, 26th (g)	177	9,680,000	6000	—	—	—	—	—	—	—	—
Sept. 9th (h)	175	9,850,000	6000	—	—	—	—	—	—	—	—
,, 29th	185	9,800,000	—	—	—	—	—	—	—	—	In September the diet was changed so as to include fish or meat every day at the mid-day meal. From Sept. 15th to Oct. 8th Roentgen ray treatment was carried out; 21 sittings of from five to ten minutes' exposure of the splenic region. At several sittings the lower parts of the legs were likewise exposed for five minutes.
Oct. 14th	184	9,968,000	7320	—	—	—	—	—	—	—	—
Nov. 16th.	177	9,976,000	8320	—	—	—	—	—	—	—	From Oct. 31st to Dec. 5th, 1904, three grains of iodide of potassium were given three times daily.
,, 30th (i)	156	8,480,000	8200	81·0	12·6	5·6	0·6	0·2	Several.	7·74 μ	—
Dec. 9th (j)	—	—	—	73·0	15·0	8·4	3·0	0·6	,,	—	—
,, 16th (k)	158	—	—	72·6	14·0	7·0	1·0	0·4	,,	—	—
,, 23rd (l)	161	9,280,000	4800	—	—	—	—	—	—	—	Venesection, 100 cubic centimetres.
1905.											
Jan. 3rd	156	8,625,000	7500	75·4	18·6	5·4	0·6	Present.	Present.	—	—
,, 12th (m)	145	9,568,000	6000	66·0	25·4	6·6	2·0	,,	,,	—	During the last days of December to Jan. 12th the patient was taking 15 grains of bromide of potassium and seven and a half grains of aspirin thrice daily. From Jan 12th to Feb. 6th, 1905, she took ten grains of salicylate of sodium thrice daily.
1st	148	8,568,000	4000	75·0	11·0	11·6	2·0	0·4	,,	7·6 μ	—
Feb. 6th	164	8,680,000	4800	80·4	14·0	4·0	1·0	0·6	,,	—	—

Remarks.—(*a*) The differential count was of 400 white cells by Dr. Eastes. During the count one mast cell was found. There were no myelocytes or erythroblasts. Three or four of the white cells counted were "intermediate forms" and Dr. Eastes enumerated these with the type which they most resembled. (*b*) This blood count was made by Dr. Drysdale when he kindly came to see the patient. The large lymphocytes were counted with the small lymphocytes as "lymphocytes." I have therefore included them in the group of small lymphocytes; Dr. Drysdale is not responsible for this. (*c*) Dr. Eastes made the differential count and reported that no myelocytes or erythroblasts were seen and that there was no poikilocytosis. Films were likewise sent to Professor H. Vaquez, who mentioned in his paper with Dr. C. Laubry that they confirmed his opinion that in splenomegalic polycythæmia there was no hyperglobuly, that is is to say, increase in the average diameter of 100 red cells, though microcytes and macrocytes might be present. (*d*) Dr. Wright kindly took away specimens of the blood and urine for examination (see later). His count made the red blood corpuscles just over 11,000,000 in the cubic millimetre, a result not very different from that of the count at the hospital. (*e*) This count was taken after unusually copious menstruation. (*f*) The differential count was of 500 white cells by Dr. Boycott. He found the average diameter of 50 red cells to be 7·48 μ; the maximum diameter 8·57 μ; and the minimum diameter 5·96 μ. (*g*) In August it was noted that the patient could walk about without the left foot becoming hot or different in colour from the right foot. (*h*) The specimen of blood from which this count was made was obtained directly from a superficial vein in the right forearm by a Pravaz syringe. (*i*) The blood examination is by Dr. Boycott. During the differential count of 500 white cells he found three normoblasts, one with polychromatic cytoplasm and about 12 polychromatic red cells. The red cells varied from 4 μ to 10 μ in diameter and there were too many oval and irregular shapes. The hæmoglobin was estimated by Dr. Haldane (see also later). (*j*) The red cells, Dr. Boycott said, showed the same abnormal variation in size, shape, and staining capacity as at the last examination. He soon found several normoblasts and some polychromatic red cells. (*k*) The hæmoglobin estimation was by Dr. Haldane. (*l*) The blood examination was of blood obtained by venesection containing 1 per cent. of a 50 per cent. aqueous solution of citrate of potassium. (*m*) The differential counts in 1905 were all of 500 white cells by Dr. Boycott as were all the others from Nov. 30th. Dr. Haldane estimated the hæmoglobin on Jan. 21st. In the blood films of Feb. 6th Dr. Boycott thought the changes in the red cells were much less marked than before and could only discover one normoblast with great difficulty.

rather pale, acid, of low specific gravity (about 1010), somewhat increased in quantity, and free from albumin and sugar. The percentage of urea has not been regularly estimated. On one occasion it was 1·9 per cent., making the total daily excretion up to, or somewhat above, the average. The body weight on June 21st, 1904, was 10 stones 6 pounds. On August 23rd it was 10 stones 10 pounds; on Nov. 21st it was 11 stones. On Feb. 6th, 1905, it was 11 stones 2 pounds. Slight enlargement of the thyroid gland was temporarily noticed in October, 1904. There is considerable deafness in both ears, possibly connected with chronic dry catarrh. The patient's subjective symptoms consist in a disagreeable noise in her ears and occasionally headache and slight vertigo; also apparently feelings of prostration. The noise in her head is always present but varies in character from a whizzing or rushing to a roaring or rumbling sound and is rhythmical with the heart's action. I will now give an account of the examination of the blood and circulatory system whilst the patient has been under observation.

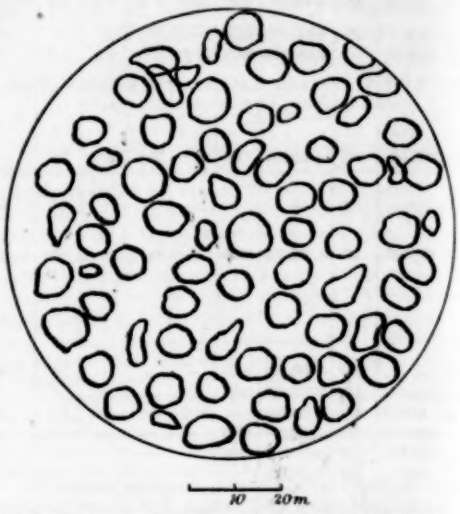
Circulatory system.—As already mentioned, nothing abnormal has been found by physical examination of the heart, the apex beat being in the fifth left intercostal space internal to the nipple line and the area of cardiac dulness not being increased. The pulse at the wrist is of medium volume and increased tension; it is regular, the rate being about from 80 to 90 in the minute, but affected by mental excitement. Pulse tracings made with a Dudgeon's sphygmograph in June, 1904, showed a pulse of high tension. On Dec. 20th, 1903, Hill and Barnard's pocket sphygmometer on the radial artery gave the mean blood pressure as about 140 millimetres of mercury (that is, the pressure at which the oscillations were greatest), but their larger instrument on the arm showed a pressure of about 165 millimetres of mercury. On Dec. 16th, 1904, Dr. J. S. Haldane kindly estimated the maximum brachial blood pressure by Martin's modification of the Riva-Rocci apparatus and found it to be 157 millimetres of mercury and on Jan. 21st, 1905, he found it 152 millimetres of mercury. In June, 1904, Dr. R. Gruber kindly made an ophthalmoscopic examination of the blood-vessels in the fundus oculi and reported that the veins were markedly congested and slightly tortuous but the macular region did not show any decided enlargement of capillaries such as he had noted in the case of chronic cyanosis and polycythæmia[5] already alluded to.

The blood.—The following table is intended to show the results of blood counts[6] and microscopic examination of the blood in relation to diet and treatment from March, 1904, to February, 1905. It must be remembered that owing to the improvement in the condition of the left lower extremity the patient was able to be up and to get about much more at the end of this period than at the beginning and this may have exercised an influence on the general condition.

In addition to the drugs mentioned in the table bromides, aspirin, and valerian were sometimes used. At the commencement of July, 1904, minute doses of calomel were tried for about a week but without any obvious effect on the general condition.

The red cells and hæmoglobin value.—The red cells varied abnormally in size, and according to Dr. A. E. Boycott in shape and staining capacity. These changes, together with the presence of a few nucleated red cells, might, as Dr. Boycott points out, be ascribed to unusual activity in the erythroblastic functions of the bone marrow. The nucleated red cells seen were all normoblasts and in the blood films from Nov. 30th, 1904, as many as three were noticed during a differential count of 500 white cells; in the blood from Dec. 16th 11 normoblasts were found on two slides in the course of a search of about three-quarters of an hour. Erythroblasts have likewise been observed by Türk and some others in cases of splenomegalic polycythæmia. In regard to the occasional presence of nucleated red cells in normal human blood, Dr. Boycott tells me that though probably present in all persons they are *extremely* rare. During the winter 1903–04 he searched about 500 blood films with this point in view and only found three or four altogether, though 500 leucocytes were counted in each specimen. The hæmoglobin values of the blood noted in April, 1904, were relatively low; probably the colour index of the corpuscles, and perhaps their size also, increased soon after this. The highest hæmoglobin values recorded were on Oct. 14th, 1904 (184 per cent.), and on Sept 29th (185 per cent.), but the hæmoglobinometers used on these occasions had not been specially standardised. The recent figures have varied from 145 to 164 per cent. The hæmocytometer readings have on the whole varied less that the hæmoglobinometer readings. The largest number of red cells recorded was 10,960,000 on June 20th, 1904, and the lowest was 8,016,000 on August 3rd; at present (Feb. 6th, 1905) there are about 8,500,000 in the cubic millimetre and the average colour index of the cells is nearly up to the normal.

FIG. 1.



Red blood corpuscles showing variations in size and shape in a film taken on August 15th, 1904. Drawn to scale by Dr. Boycott.

Vaquez[7] is probably right in saying that in splenomegalic polycythæmia, even when combined with marked cyanosis, there is no "hyperglobuly"—that is, that the average size of the red cells, judged by their average diameter, does not exceed normal limits. In my last case[8] it did not and in the present case it does not, for Dr. Boycott estimated the average diameter at 7·7 μ on Nov. 30th, 1904, and at 7·6 μ on Jan. 21st, 1905.[9] In an old preparation from August 15th, 1904, he made it only about 7·5 μ. In this connexion it is interesting that Dr. A. E. Wright,[10] who kindly examined the patient's blood on June 20th, 1904, counted the red cells as just over 11,000,000 in the cubic millimetre, and in the sedimentation tube obtained 9·25 volumes instead of the ordinary five volumes of corpuscles in ten volumes of blood. It may here be recalled that J. A. Capps, in his "Study of Volume Index,"[11] concluded that the volume of the individual erythrocyte is best obtained by using the centrifuge in conjunction with the hæmocytometer.

The white cells.—In regard to the white cells the first thing to be noticed is the relative leucopenia, which has lately been very pronounced, the count having been on three occasions as low as from 4000 to 5000 in the cubic millimetre of blood. Relative leucopenia has, however, not been a feature in all cases of splenomegalic polycythæmia. The second point is the high percentage of polymorphonuclears, from

[5] Weber and Watson, loc. cit.

[6] The blood counts were made by a Thoma-Zeiss's hæmocytometer and the hæmoglobin value was obtained either by a Gowers's hæmoglobinometer or by Haldane's modification. In the later estimations (Nov. 30th and later) either a correct Haldane's instrument was used or an old Gowers's instrument freshly standardised by the kindness of Dr. Haldane and Dr. A. E. Boycott. The instruments used in the earlier estimations were not freshly standardised. I had the pipette of a Gowers's hæmoglobinometer graduated so that only half the usual amount of blood might be sucked up. In this way the diluted blood does not rise above the scale.

[7] Vaquez: Du Volume des Globules Rouges dans les Polyglobulies avec Cyanose, Société de Biologie, Paris, July 16th, 1904.

[8] See Weber and Watson, loc. cit. The average diameter was 7·11 μ.

[9] Dr. Boycott used ordinary stained blood films for this purpose, measuring from 50 to 100 cells on each occasion.

[10] On the Volumetric Estimation of the Corpuscular Elements, THE LANCET, Jan. 23rd, 1904, p. 216.

[11] Journal of Medical Research, Boston, December, 1903, vol. x., p. 367.

66 to 81. This, Dr. Boycott thinks, forms additional evidence of unusual activity in the bone marrow. In my previous case of splenomegalic polycythæmia[12] the polymorphonuclears constituted 82·4 per cent. of the total white cells and Vaquez[13] found the proportion to be from 79 to 82 per cent. No myelocytes were found in the blood from either of my cases.

Total volume of the blood.—Dr. Haldane kindly came three times to estimate the total quantity of the patient's blood by his carbon-monoxide method.[14] After the last visit he wrote that not only was there no doubt at all as to the enormous increase in the red corpuscles and hæmoglobin but that he also felt convinced that the last blood volume determination (Jan. 21st, 1905) left no loop-hole of error as to there being also a large increase in the blood volume, though not so large as in many cases of chlorosis, according to Professor J. Lorrain Smith's estimations. The following are Dr. Haldane's figures of his first determination (Nov. 30th, 1904) and of his third determination (Jan. 21st, 1905). He thinks that there was certainly an error in his second determination (Dec. 9th, 1904) which has therefore been omitted.

TABLE II.—*Showing Figures connected with the Estimation of the Total Volume of the Blood by the Carbon Monoxide Method.*

Date.	Volume of CO in cubic centimetres at 0°C. and 760 millimetres barometric pressure.	Saturation of hæmoglobin per cent.	Total oxygen capacity of blood in cubic centimetres.	Percentage of hæmoglobin.*	Total volume of blood in cubic centimetres.†	Red corpuscles in cubic millimetre of blood.	White corpuscles in cubic millimetre of blood.	Body weight in kilogrammes (clothes allowed for).	Cubic centimetres of blood per 100 grammes body weight.	Oxygen capacity per 100 grammes body weight in cubic centimetres.
1904.										
Nov. 30th.	74·0	4·6	1610	156	5600	8,480,000	8200	68	8·2	2·4
1905.										
Jan. 21st.	127·0	7·0	1810	148	6000	8,568,000	4000	68	9·7	2·7

* The normal percentage of hæmoglobin is reckoned as 100. It may be added that 100 cubic centimetres of blood with this normal percentage of hæmoglobin can take up 18·5 cubic centimetres of oxygen.

† The normal individual is estimated to possess 4·6 cubic centimetres of blood per 100 grammes body weight.

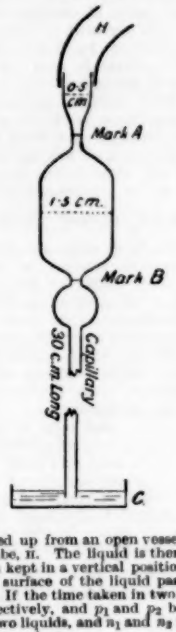
The residue of carbon monoxide was analysed after each experiment to ascertain its degree of purity and the air left in the bladder was also analysed to make certain that the carbon monoxide had been actually absorbed.

Amount of iron in the blood.—Some blood (45¼ grammes) after serving for the viscosity and cryoscopy examinations was used by Mr. J. H. Ryffel, B.Sc., to obtain a quantitative estimation of the iron. He dried the blood in a platinum dish in the water oven, then ignited in the dish till all carbon was burnt away, dissolved the ash in strong hydrochloric acid, diluted, filtered, evaporated in a porcelain dish with a few drops of strong nitric acid, redissolved in dilute hydrochloric acid, precipitated with ammonia, filtered, washed, dissolved in dilute sulphuric acid, reduced with pure zinc, filtered through asbestos, and titrated with $\frac{N}{10}$ permanganate solution. Mr. Ryffel found that the percentage of iron, calculated for the undiluted blood, was 0·0673 gramme per cent. Dr. Boycott points out that supposing hæmoglobin to contain 0·33 gramme per cent. of iron Mr. Ryffel's result would correspond to 23·9 grammes of hæmoglobin per cent. in the blood; the 100 per cent. of Haldane's hæmoglobinometer standard corresponds to an oxygen capacity of 18·5 per cent., which is believed to be equivalent to 13·7 grammes of hæmoglobin per cent. in the blood; Mr. Ryffel's result would therefore correspond to 174 per cent. of hæmoglobin on Haldane's scale. The hæmoglobin actually found in the venesection blood was 161 per cent. Allowing, therefore, for a little iron in the white blood corpuscles (normal blood plasma is said to be free from iron) and for some evaporation (concentration of the blood) during the viscosity estimation, Mr. Ryffel's estimation of the total iron in the blood corresponds with the percentage of hæmoglobin found.

Specific gravity of the blood.—On June 27th, 1904, the specific gravity of a sample of the patient's blood obtained by pricking the finger was found to be 1·078 by the help of Hammerschlag's method. By the more accurate (pyknometer) weighing method the specific gravity of the blood obtained at the venesection on Dec. 23rd, 1904 (after being mixed with 1 per cent. of a 50 per cent. aqueous solution of potassium citrate) was found to be 1·072.

Viscosity of the blood.—I made use of the citrated blood obtained at the venesection on Dec. 23rd, 1904, to examine its viscosity by means of a viscosity tube exactly similar to the one suggested to me by Professor Arthur Schuster and made for me by Messrs. Baird and Tatlock, which I had employed with Mr. J. H. Watson in 1904[15] to ascertain the influence of the proportion of corpuscles on the viscosity of blood (in blood from a horse citrated to hinder coagulation). I found that the citrated blood from the patient took 203 seconds to run through the bulb of the tube, from one mark to the other, water taking only 19 seconds.[16] The specific gravity of the citrated blood was 1·072. Therefore, according to the formula given me by Professor Schuster, if n_1 = the coefficient of viscosity of the citrated blood and n = the coefficient of viscosity of water at the temperature at which the experiment was made, $n_1 = \frac{n \times 203 \times 1{\cdot}072}{19 \times 1{\cdot}000}$. Therefore the coefficient of viscosity of the citrated blood was 11·45 times the co-efficient of viscosity of the water used. Unfortunately, the temperature of the water used was not taken and it may have been below the temperature of the room, which was about 18·4° C. Evidently, however,

FIG. 2.



The liquid is sucked up from an open vessel, C, by means of an indiarubber tube, H. The liquid is then allowed to fall whilst the tube is kept in a vertical position. The times at which the upper surface of the liquid passes the marks A and B are noted. If the time taken in two different liquids be t_1 and t_2 respectively, and p_1 and p_2 be the respective densities of the two liquids, and n_1 and n_2 their coefficients of viscosity, then $\frac{n_1}{n_2} = \frac{t_1 \, p_1}{t_2 \, p_2}$; so that, if for one liquid (as in our case, for water), n_2 is known, n_1 may be calculated out.

[12] Weber and Watson: Loc. cit.

[13] Vaquez and Laubry: Cyanose avec Splénomégalie et Polyglobulie, Tribune Médicale, Paris, August 13th, 1904, p. 517.

[14] Vide J. Haldane and J. Lorrain Smith: The Mass and Oxygen Capacity of the Blood in Man, Journal of Physiology, August 29th, 1900, vol. xxv., p. 331.

[15] Vide Weber and Watson: Transactions of the Clinical Society of London, 1904, vol. xxxvii. (the apparatus used is described and figured on p. 131).

[16] The tube previously used for the experiments with horse's blood was not used on this occasion because water took about 44 seconds to run through the bulb and the estimation of the viscosity of the patient's blood would have taken an unnecessarily long time.

the viscosity of the blood was excessive, higher than that of blood in all ordinary diseases and conditions.

Cryoscopy of the blood.—Some blood obtained at the venesection on Dec. 23rd, 1904 (mixed with 1 per cent. of a 50 per cent. aqueous solution of potassium citrate), was employed by Dr. W. d'Este Emery, clinical pathologist at King's College Hospital, to determine the freezing point, which he very kindly did on the day on which the blood was obtained. After the slight correction necessary for the presence of potassium citrate the freezing point was found to be minus 0·53° C., and therefore not very different from that of normal blood, which is about minus 0·56° C. The urine passed by the patient immediately after the venesection was of specific gravity 1008, faintly acid, and free from albumin and sugar. Dr. Emery found its freezing point was minus 0·79° C. Dr. Emery added that the blood plasma could not be collected in amount sufficient for the estimation of the freezing point, as after thorough centrifugalisation of a specimen of the citrated blood the plasma layer was only about two millimetres thick or, roughly speaking, only about 3 per cent. of the blood column.

The salts in the blood and urine.—On June 20th, 1904, Dr. Wright[17] estimated the salts in the blood as equivalent to 0·58 per cent. of sodium chloride (in lieu of the normal about 0·78 per cent.), the salts of the urine[18] coming out as equivalent to 0·46 per cent. of sodium chloride. This, Dr. Wright says, gives an excretory quotient of about 0·8 instead of the normal of over 2·0. However, on June 26th, 1904, he estimated the salts in the blood serum as equivalent to 1·14 per cent. of sodium chloride, whilst the salts in the fluid from a blister were equivalent to 0·95 per cent. of sodium chloride.

The alkalinity of the blood.—Dr. Wright estimated this on June 26th, 1904, as equivalent to that of a normal alkaline solution diluted 35 times. He expresses it as $\frac{N}{35}$.

The amount of albuminous substance in the blood plasma.—Dr. Wright found the amount in the citrated blood obtained on Dec. 23rd, 1904 (at the venesection), to be normal. His method of measuring the albuminous substances is by the resistance of the clot obtained by heating a graduated series of dilutions of the plasma.[19]

The coagulation of the blood.—Dr. Wright thought its occurrence was very much delayed on June 20th, 1904. Afterwards it appeared to occur fairly readily, but the exact coagulation time was not estimated.

The resistance of the red cells to hæmolytic agents.—Dr. Wright examined the citrated blood taken Dec. 23rd, 1904, by a method of his own and found the resistant power of the red cells to be about normal. One volume of centrifugalised sediment of red cells (the red cells were by repeated centrifugalisation washed fairly clean of blood-plasma) was suspended in sufficient $\frac{N}{10}$ salt solution to bring the total volume of the suspension up to three volumes. Complete hæmolysis was then obtained by adding one volume of the suspension in a capillary tube to one volume of a $\frac{N}{30}$ salt solution.

EFFECT OF TREATMENT AND PROGRESS OF THE CASE.

As already stated, it is exceedingly difficult to estimate how much the patient's condition has really altered apart from the improvement in the erythromelalgic extremity. She can now walk about quite well and has gained in weight, the erythromelalgia has disappeared, but the polycythæmia, high arterial tension, and the other phenomena in the blood and circulatory system persist, as do likewise the subjective symptoms (headache, &c.), although they vary in degree from time to time. Arsenic, which was employed by W. Türk[20] in his cases, was soon discontinued in the present case on account of a considerable apparent increase in the number of red corpuscles which followed its use. On the whole the patient has seemed to be better when on a diet containing relatively little meat and when taking lemon juice daily. It is possible that small doses of iodide of potassium or salicylates have a favourable influence. I have little doubt that absolute rest in bed, which was at one time required owing to the erythromelalgia, has an injurious influence on the general condition and some of the slight apparent improvement in the general condition may be due to the patient having been able to take a little exercise (favouring metabolic processes). Opium and its derivatives have not been given a trial. In regard to drugs, such as phenacetin and antifebrin (acetanilide), it must not be forgotten that the chronic use of antifebrin seems to give rise to cyanosis and blood changes.[21]

The venesection in the present case seemed to make no difference in the subjective or objective condition and it was not repeated, but perhaps the amount of blood (100 cubic centimetres) withdrawn was too little to produce any decided change. It may be noted also that the diminution in the number of red blood corpuscles observed on August 3rd, 1904, followed unusually copious menstruation.

The employment of Roentgen rays, which has lately been found to have such a decided effect in many cases of leukæmia, seems to have made no change in the number of red blood corpuscles in the present case. This is not to be wondered at since the action of these rays on the spleen and hæmopoietic tissues in leukæmia seems to be chiefly on the lymphocytes ("lymphocytolysis") and lymphadenoid tissues and on the leucocytes generally ("leucolysis").[22] It is, however, to be noted that after a good many Roentgen-ray sittings the patient complained more of headache or feeling of congestion in the head and this decided us to discontinue the treatment. The number of white cells in the cubic millimetre has been particularly low at recent counts (see Table I.) and the spleen has not been so easy to feel. It is possible, therefore, that the Roentgen rays, though they had no influence on the number of red blood cells, may have had a slight tardy effect on the spleen and on the formation of white cells analogous to that recorded in cases of leukæmia. The Roentgen-ray treatment was carried out by Dr. Müllberger, senior house surgeon at the German Hospital, who employed apparatus of Siemens and Halske of London, with direct street main supply; spark gap 25 centimetres; mercury dip break; 220 volts; 10 amperes; frequent breaks; hard tube (C. H. Müller, of Hamburg, No. 13, with vacuum-regulating apparatus); distance of the patient's skin from anticathode 50 centimetres; diaphragm compressor according to Dr. Faulhaber of Würzburg. The splenic region was subjected to the treatment for five minutes at every sitting and for one minute in addition every subsequent sitting till ten minutes were reached, after which the time of exposure was not changed. The treatment was carried out regularly, one sitting every day (Sundays excepted), from Sept. 15th to Oct. 8th, 1904, 21 sittings altogether. At nearly all of these sittings the lower parts of the legs were likewise exposed to the rays for five minutes.

In regard to future treatment it will be important to observe how the patient progresses now that she has left the hospital; in fact, the question is whether any special treatment is at present advisable or not. In the absence of all evidence that the disease is primary in the spleen I do not think that the operation of splenectomy can be recommended

REMARKS AND CONCLUSIONS.

As stated at the commencement of this paper I regard the present case, in spite of the absence of cyanosis, as similar in nature to my previous case[23] of splenomegalic polycythæmia. The excess of red corpuscles, true plethora ("polyhæmia") and arterial hypertonia were present in both cases. In the previous case the polycythæmia with the resulting increased viscosity of blood and increased strain on the circulatory mechanism was doubtless of older standing, the patient's vital powers were probably on the decline, and the cyanosis and relatively scanty urine may have been a result of a gradually developing inadequacy of the circulatory mechanism to compensate for the great viscosity of the blood (in spite of the presence of high arterial blood pressure).

The conclusions arrived at in my paper with Dr.

[17] Vide Wright and Kilner on a New Method of Testing the Blood and the Urine, THE LANCET, April 2nd, 1904, p. 921.

[18] This was the urine passed directly after the examination of the blood, the bladder having been emptied before the examination. It was of specific gravity 1010, clear, rather pale, acid, and free from albumin.

[19] A. E. Wright: THE LANCET, Jan. 23rd, 1904, p. 218.

[20] Wiener Klinische Wochenschrift, 1904, Nos. 6 and 7.

[21] Stengel and White: A Report of a Case of Chronic Acetanilide Poisoning, with Marked Alterations in the Blood, University of Pennsylvania Medical Bulletin, Philadelphia, February 1903, p. 462.

[22] Cf. especially A. Wolff: Theoretisches über die Behandlung der Leukämien und Anämien mit lytischen Methoden durch Röntgenstrahlen und Leukolytische Sera, Wiener klin.-ther. Wochenschrift, 1904, No. 49

[23] Weber and Watson, loc. cit.

Watson as to a pathological activity in the production of erythrocytes in the bone marrow being the cause of the blood and circulatory phenomena have, I think, been amply confirmed by the present case. Our theoretical observations on a possible alteration in the osmotic tension of the blood may not have been required to explain the phenomena observed and, indeed, I shall not discuss that question here, as I have no fresh evidence to offer that there is any special change in regard to osmotic tension to be found in the symptom-complex under consideration.

In my previous case the existence of most extensive bone-marrow changes was proved by examination after death. A great portion of the normal bone marrow of the shafts of the long bones was found to have been replaced by red bone marrow, relatively free from fat, in which very active formation of red corpuscles was in progress as evidenced by the large quantity of erythroblasts. The changes were, however, not exclusively of an erythroblastic kind and it may be doubted whether the erythrocyte-producing functions of the bone marrow can ever be greatly increased without the myelocytes being to some extent involved in the unusual activity. Dr. Boycott has pointed out that in the present case an abnormal activity of the bone marrow may not only account for the excess of red cells in the blood, for the great variations in their size (and for the variations noted in lesser degree in their shape and staining capacity), and for the presence of nucleated red cells, but likewise for the high percentage of polymorphonuclear leucocytes. These changes have been found in other cases of splenomegalic polycythæmia. There is no evidence pointing to diminished destruction or lessened wearing out of red blood cells as a factor in the production of the anomalous blood condition. If the polycythæmia were due merely to concentration of the blood it would doubtless be only temporary and the blood would rapidly be diluted by fluid absorbed from the alimentary canal either directly into the blood capillaries or else into the lacteals to be thrown into the blood stream by way of the thoracic duct. Moreover, the fact that the total volume of blood in the body is abnormally great precludes the possibility that mere concentration of blood can be the cause of the blood changes. The clinical investigations of these blood changes, as already pointed out, as well as post-mortem examination, show that in cases of splenomegalic polycythæmia there is increased production of red corpuscles and I think the evidence is now really conclusive that the symptom-complex is always accompanied by, and at all events mainly due to, a pathological activity in the bone-marrow. Whether the latter condition can or cannot be regarded as the primary factor is a question to which I shall refer later. The objection to calling the symptom-complex "primary myelopathic polycythæmia" is that we are not sure that the disturbance of the bone marrow is necessarily the primary pathogenic factor; whilst the term "myelogenic polycythæmia" is insufficient, for every polycythæmia, excepting temporary states due to mere concentration of the blood, is "myelogenic" in the sense that the excess of red blood corpuscles is due to unusual activity of the bone marrow. On the other hand, the term "splenomegalic polycythæmia" only signifies that the spleen is usually enlarged, not that it must necessarily be found enlarged in every case.

I now believe the *order of development of the main symptoms* and their *causal connexion* to be as follows:—1. Increased erythroblastic activity involving a great part, but not necessarily the whole, of the bone marrow.[24] 2. Increased viscosity of the blood resulting from the polycythæmia. 3. Dilatation of small blood-vessels, partly to lessen resistance to the abnormally viscous blood, partly to make more room for dilution of the blood. 4. The "plethora vera" or "polyhæmia" is probably to be regarded as an attempt to compensate for the increased viscosity of the blood and for the excessive percentage of the total blood volume occupied by the cells. In fact, it is necessary, firstly, that there should be sufficient blood plasma to nourish the tissues and make metabolism possible; and, secondly, that the viscosity may not become so great as to render sufficient circulation impossible. 5. The arterial hypertonia is to be regarded as a result of the greater strain thrown on the circulatory mechanism. 6. Cyanosis, when this occurs, is probably due to inadequacy of the series of compensatory changes which, according to my view, precedes it.

In my opinion the evidence afforded by this and other cases strongly supports the foregoing conclusions, but the question now arises, *What is the nature of the pathological activity in the erythroblastic function of the bone marrow?* At least two theoretical explanations suggest themselves. In the first place that the bone-marrow activity is a primary one, allied to a tumour formation, or the result of an "idiosyncrasy" of the patient. One can suppose, for instance, that some persons have a bone marrow which reacts to ordinary erythroblastic stimuli to an excessive degree—viz., by throwing almost double the normal quantity of red cells into the blood stream. If, however, as H. Ribbert[25] believes there is a form of "myeloma"—that is to say, of growth originating in the elements of the bone marrow—which should be termed "erythroblastoma," because the tumour cells are related to erythroblasts, it seems possible that cases of splenomegalic polycythæmia, such as our two cases, may bear a relation to cases of erythroblastoma similar to that which lymphocytic leukæmia bears to lymphocytic myeloma.[26] The other explanation is that some toxin of a hæmolytic nature manufactured in the enlarged spleen or alimentary canal is absorbed into the circulating blood in minute quantities not sufficient to cause much hæmolysis but in amounts just sufficient to excite reaction in the hæmopoietic (erythroblastic) tissues. Metchnikoff quotes Belonovsky[27] of St. Petersburg as having increased both the number of corpuscles and the amount of hæmoglobin in the blood of anæmic persons by the injection of minute doses of hæmolytic serum.

I have just mentioned these possible alternatives in regard to the nature of the bone-marrow activity in splenomegalic polycythæmia, but they are merely theoretical suggestions and I do not think it will be profitable to discuss them further without additional evidence.

The cause of the splenic enlargement.—If one inclines to the view that the bone-marrow condition in splenomegalic polycythæmia is the result of reaction to toxins circulating in the blood it is natural to suggest that the enlargement of the spleen is due to the same toxins, whether they enter the circulation from the intestines or elsewhere, or else that there is a primary disease of the spleen, such as tuberculosis (as there actually was in the case of Rendu and Widal[28] and some other cases), which gives rise to a condition of toxæmia to which the bone marrow reacts (excessive reaction being explained by idiosyncrasy) by an erythroblastic reaction resulting in polycythæmia. In favour of such a view there is the fact that in Saundby and Russell's case of splenomegalic polycythæmia with cyanosis Dr. J. W. Russell saw the patient with an enlarged spleen several years before cyanosis developed. To this I would answer that the polycythæmia was probably likewise present for years before the cyanosis developed and that cyanosis, if the views I have brought forward are correct, is not an essential part of the symptom-complex.

In my present case the enlargement of the spleen is not excessive and does not appear to be progressive and there is no fever or reaction to tuberculin to suggest the presence of tuberculosis. Splenic tuberculosis is certainly not necessarily present in cases of splenomegalic polycythæmia and primary tuberculosis of the spleen is not necessarily accompanied by polycythæmia.[29]

Possibly in the cases in which the splenic enlargement is due merely to increase of the pulp and engorgement with blood, as it seems to have been in my previous case, it may be explained as being due to the plethora vera (polyhæmia) and high blood pressure or as resulting from excessive functional activity in attempting to compensate for the excessive production of red corpuscles by increased destruction. Of these two last alternatives the former seems to me

[24] In post-mortem investigations on these cases it would obviously, therefore, be a great mistake to be content with the examination of one portion of bone marrow. Part of the shaft of one long bone might be filled with bone marrow of the ordinary yellow fatty variety and yet the total active red-cell-forming bone marrow in the body might be more than three times the normal amount.

[25] H. Ribbert: Centralblatt für Allgemeine Pathologie, Jena, 1904, vol. xv., No. 9.

[26] Cf. F. Parkes Weber: A Case of Acute Leukæmia, with a Scheme of Classification of Leukæmias and Pseudo-leukæmias, Transactions of the Pathological Society of London, 1903, vol. liv., p. 286.

[27] Sur l'Influence de l'Injection de Diverses Doses de Sérum Hémolytique sur le Nombre des Eléments du Sang, St. Petersburg, 1902.

[28] Bulletin de la Société Médicale des Hôpitaux de Paris, 1899, p. 528.

[29] An Unexplained Condition of Chronic Cyanosis, THE LANCET, Feb. 22nd, 1902, p. 515.

[30] Cf. Y. Bayer, Ueber die Primäre Tuberkulose der Milz, Mitteilungen aus den Grenzgebieten der Medicin u Chirurgie, 1904 vol. xiii., p. 523.

the most probable, as there is as yet no evidence of greatly increased destruction of red cells in these cases either occurring in the spleen or elsewhere.

Relation of erythromelalgia to polycythæmia.—There is no certain causal relationship and in the present case the association of the two conditions may have been a chance one. Yet it must be remembered that the association of splenomegalic polycythæmia with erythromelalgia has already been noted by W. Türk[21] of Vienna. I have elsewhere[22] given my reasons for believing that in the so-called "idiopathic or neuropathic erythromelalgia," as well as in what might be termed "symptomatic erythromelalgia" (that is, severe pain and redness in an extremity affected with decided arterial obstruction), there is obstruction to the supply of arterial blood, at all events during the chronic stages. In the present case the muscular atrophy and absorption of bone salts in the affected extremity[23] at one time pointed to local deficiency of arterial blood-supply. It is possible that when for any reason the supply of blood to the bone marrow of a long bone is greatly diminished the bone marrow may make an attempt to manufacture more blood; in fact, may undergo a hæmopoietic (erythroblastic and leucoblastic) reaction. Through the kindness of my colleague, Dr. E. Michels, in 1904 I had the opportunity of examining the tibia removed by amputation from an extremity affected by chronic arterial obstruction. There was some red metaplasia of the bone marrow at the ends of the shaft. In this case, however, the bone-marrow reaction may have been connected with the septic pyrexia preceding the amputation. Dr. J. Galloway also kindly showed me a patient with pain and redness in one foot undoubtedly due to arterial obstruction and informs me that in that patient the blood has been repeatedly examined and the number of red cells has always been found considerably above the normal. Such an increase in the number of red blood corpuscles was, however, not present in another somewhat analogous case, and further information is needed to find out whether chronic ischæmia of an extremity, which can notoriously give rise to local muscular and osseous atrophy, can likewise produce changes in the bone marrow of the affected part besides those due to absorption of fat cells.

I have to thank all those who have so kindly assisted me in the examination of this case, without whose assistance I could not have arrived at my few conclusions—in the first place, Dr. Haldane, Dr. Boycott, and Dr. Wright, and then Dr. J. H. Drysdale, Dr. Emery, Mr. Ryffel, and Dr. G. L. Eastes, and also (not least) the house physicians at the German Hospital, Dr. R. Blendinger and Dr. Schuh.

ADDENDUM.—In cases of splenomegalic polycythæmia the onset of chronic cyanosis probably still further increases both the viscosity and the total volume of the blood. The effect of carbonic acid gas in increasing the viscosity of the blood has been clearly demonstrated by J. Bence[24] who states also that, according to Limbeck, an increase in the total volume of the blood accompanies the increase in the viscosity and adds that, according to Hamburger, this volumetric increase depends on an alteration in the osmotic relation between the red corpuscles and the blood plasma. Since writing the present paper I have come across an interesting account by W. Weintraud of three cases of splenomegalic polycythæmia.[25] The second of Weintraud's patients suffered also from a condition said to resemble erythromelalgia. In the same case, on one occasion, a remarkable improvement in the subjective symptoms followed a sharp attack of hæmatemesis.

Bibliography.[26]—J. Bayer: Ueber die Primäre Tuberkulose der Milz, Mitteilungen aus den Grenzgebieten der Medizin und Chirurgie' Jena, vol. xiii., 1904, p. 523. Xavier Bender: La Tuberculose de la Rate, Gazette des Hôpitaux, Paris, March 31st, 1900, p. 375. R. Breuer: Wiener Gesellschaft für Innere Medicin, 1903; quoted by W. Türk. R. C. Cabot: A Case of Chronic Cyanosis without Discoverable Cause ending in Cerebral Hæmorrhage, Boston Medical and Surgical Journal, Dec. 7th, 1899, p. 574; A Second Case of Chronic Cyanosis without Assignable Cause, ibid., March 15th, 1900, p. 275. Collet and Gallavardin: Tuberculose Massive Primitive de la Rate, Archives de Médecine Expérimentale et d'Anatomie Pathologique, Paris, 1901, vol. xiii., p. 191. J. Collins: Chronic Cyanosis of the Extremities associated with Polycythæmia and Splenomegaly, Medical Record, New York, Nov. 21st, 1903, p. 807. V. Cominotti: Hyperglobulie und Splenomegalie, Wiener Klinische Wochenschrift, 1900, No. 39, p. 881. G. A. Gibson: Adaptation and Compensation, THE LANCET, Dec. 5th, 1903, p. 1560; also Some Observations on Cyanosis, Proceedings of the Royal Society of Edinburgh, 1903, vol. xxiv., p. 393. J. N. Hall (Denver): Chronic Cyanotic Polycythæmia, with Notes upon Two Cases, American Medicine, Philadelphia, June 27th, 1903, p. 1026; quoted by J. Collins. Hess: Ueber Hypertonia Polycythæmica, Medicin Klinik, 1905, vol. i.; abstract by Pappenheim in Folia Hæmatologica, 1905, vol. ii., p. 47. Hochhaus: Ueber einen Fall von Milztumor und Hyperglobulie, Allgemeiner ärztlicher Verein zu Köln, June 27th, 1904. Kraus: Polycythämie mit Milztumor und Cyanose; this appeared in the reports of the Gesellschaft der Charité-Aerzte, Berliner Klinische Wochenschrift, March 13th, 1905, p. 307, after my paper was written. S. F. McKeen: A Case of Marked Cyanosis, difficult to explain, Boston Medical and Surgical Journal, June 29th, 1901, p. 610. R. Moutard-Martin and Lefas: Tuberculose Primitive et Massive de la Rate, Bulletins de la Société Médicale des Hôpitaux, Paris, 1899, p. 547. W. Osler: Chronic Cyanosis, with Polycythæmia and Enlarged Spleen: a New Clinical Entity, American Journal of the Medical Sciences, August, 1903; also Chronic Cyanotic Polycythæmia with Enlarged Spleen, Brit. Med. Jour., vol. i., 1904, p. 121. P. Preiss: Hyperglobulie und Milztumor, Mitteilungen aus den Grenzgebieten der Medizin und Chirurgie, vol. xiii., 1904. P. Quiserne: Des Polyglobulies, Paris Thesis, 1902. Rendu and Widal: Splénomégalie Tuberculeuse sans Leucémie avec Hyperglobulie et Cyanose, Bulletins de la Société Médicale des Hôpitaux, Paris, 1899, p. 523. J. Rosengart: Milztumor und Hyperglobulie, Mitteilungen aus den Grenzgebieten der Medizin und Chirurgie, Jena, 1903, vol. xi., p. 495. Saundby and Russell: An Unexplained Condition of Chronic Cyanosis, with the report of a case, THE LANCET, Feb. 22nd, 1902, p. 515. J. Scharold: Ein Fall von Substantiver Acuter Miliärtuberculose der Milz, Aerztliches Intelligenzblatt, Munich, 1883, vol. xxx., p. 352. D. D. Stewart: Acute Splenic Miliary Tuberculosis, Transactions of the Association of American Physicians, Philadelphia, 1901, vol. xvi., p. 431. W. Türk (Vienna): Beiträge zur Kenntniss des Symptomenbildes Polycythämie mit Milztumor und Zyanose, Wiener Klinische Wochenschrift, 1904, Nos. 6 and 7; also Wiener Gesellschaft für Innere Medicin, 1902 and 1903. H. Vaquez: Hyperglobulie et Splénomégalie, Bulletins de la Société Médicale des Hôpitaux, Paris, 1899, p. 579; also Sur une Forme Spéciale de Cyanose s'accompagnant d'Hyperglobulie Excessive et Persistante, Comptes Rendus de la Société de Biologie, Paris, May 7th, 1892. A supplementary note (Société Médicale des Hôpitaux, Paris, Jan. 25th, 1895), described the existence of splenomegaly and the absence of cardiac lesion in Vaquez's case; chronic polycythæmia with enlarged spleen might, therefore, almost be called "Maladie de Vaquez." H. Vaquez and Ch. Laubry: Cyanose avec Polyglobulie, Tribune Médicale, Paris, August 13th, 1904, p. 517. F. Parkes Weber and J. H. Watson: Chronic Polycythæmia with Enlarged Spleen, Transactions of the Clinical Society of London, 1904, vol. xxxvii., p. 115; and International Clinics, 1905, vol. 4, p. 47. R. Weil: Note sur les Organes Hématopoiétiques et l'Hématopoïèse dans la Cyanose Congénitale, Société de Biologie, Paris, June 29th, 1901, p. 713. Zaudy: Erythrozytose (Hyperglobulie) und Splenomegalie, Münchener Medicinische Wochenschrift, July 5th, 1904, p. 1207.

Harley-street, W.

[21] Wiener Klinische Wochenschrift, 1904, Nos. 6 and 7.
[22] British Journal of Dermatology, February, 1904, p. 70.
[23] This was shown by radiograms of the two feet. Vide Transactions of the Clinical Society of London, 1904, vol. xxxvii., p. 250.
[24] Deutsche Medicinische Wochenschrift, April 13th, 1905, p. 580.
[25] Zeitschrift für Klinische Medicin, 1904, vol. lv., p. 91.
[26] This does not include all the articles referred to in the footnotes.

SYMPTOMATOLOGIE ET DIAGNOSTIC DE L'ANGINE À SPIRILLES ET BACILLES FUSIFORMES (ANGINE DE VINCENT).

PAR LE PROFESSEUR H. VINCENT.

I.

LA maladie que j'ai décrite sous le nom "d'angine à spirilles et bacilles fusiformes" présente une fréquence attestée par les nombreuses publications parues sur ce sujet. Elle peut s'observer à tous les âges, mais elle est surtout fréquente chez l'enfant vers l'âge de 8 à 10 ans et chez l'adulte de 18 à 30 ans. Au delà de 35 ans, elle devient certainement plus rare. D'après mes statistiques, cette angine s'observe dans la proportion de 2·26 pour 100 cas d'angines de toute autre nature (diphtérique, streptococcique, staphylococcique, colibacillaire, etc.), chez les adultes.

Cette maladie existe dans tous les pays, sous tous les climats et chez toutes les races, y compris la race nègre. Elle n'épargne même pas ceux qui prennent soin de l'hygiène de leur bouche. Cependant, elle est plus fréquente chez les sujets malpropres, chez ceux qui abusent du tabac ou de l'alcool, chez ceux qui ont des dents cariées. Cette angine a aussi des relations avec l'évolution dentaire. Tantôt seule, tantôt associée à la stomatite ulcéro-membraneuse (qui est due, le plus souvent, ainsi que je l'ai démontré, à l'infection par les mêmes microbes) l'angine se manifeste assez souvent au moment de la deuxième dentition et à l'époque de l'éruption des dents de sagesse. L'influence particulièrement favorisante du terrain sur l'éclosion de cette infection locale, est démontrée par sa fréquence chez les sujets anémiés par la misère physiologique, affaiblis par le surmenage; chez les syphilitiques et les tuberculeux; chez ceux qui vivent dans des logements malsains, mal aérés. Cette angine a une certaine prédilection pour les étudiants en médecine qui font la dissection, pour les garçons d'amphithéâtre d'anatomie,

etc. L'angine à bacilles fusiformes et spirilles est inoculable, soit chez le malade qui en est déjà porteur, soit chez un sujet sain, ainsi que je l'ai constaté. Queyrat a inoculé les microbes de cette maladie sur la muqueuse du sillon balano-préputial, chez un homme. On ne sera pas surpris de l'inoculabilité de cette maladie puisqu'elle est sous la dépendance des mêmes microbes pathogènes que ceux de la pourriture d'hôpital ou gangrène nosocomiale, que j'ai découverts en 1896. C'est pourquoi, aussi, cette angine est quelquefois contagieuse, à la suite de cohabitation, de contact intime ou de l'usage d'un même objet (verre à boire, cuillère, pipe, etc.).

Cette angine, appelée "maladie ou angine de Vincent," est déterminée par un *bacille* spécial ayant l'aspect d'un fuseau allongé. Les dimensions de ce bacille sont de 6 à 8μ pour les formes courtes ou moyennes, 10 à 12μ pour les formes longues. La largeur est de 1μ à 1 μ 5. Examiné à l'état frais, dans la salive, ce bacille est tantôt assez mobile, tantôt peu mobile ou immobile. Il ne se colore pas par la méthode de Gram. La simple coloration de l'exsudat par la thionine, le violet phénique ou le liquide de Ziehl dilué, permet d'en obtenir des préparations satisfaisantes. Le microbe est reconnaissable à son aspect rectiligne, sa forme en fuseau, son protoplasma fréquemment vacuolaire. Il existe toujours en quantité abondante, parfois colossale, dans l'exsudat. A ce bacille s'associe en symbiose, dans la plupart des cas, un fin *spirillum* long, sinueux, très mobile, qui, dans les préparations colorées, offre un aspect tout différent de celui du bacille fusiforme et prend moins bien la matière colorante.

Angine à bacilles fusiformes et spirilles 1/12.

Les préparations des fausses membranes montrent ces deux microorganismes à l'état presque exclusif, malgré la présence d'innombrables bactéries étrangères diverses dans la cavité buccale. Les bacilles fusiformes et les spirilles semblent, en quelque sorte, "faire le vide" autour d'eux. Enfin il existe des cas dans lesquels le bacille fusiforme est seul, sans adjonction de spirilles. Quelquefois il est associé au streptocoque, au staphylocoque, au B. coli. Ces cas sont beaucoup plus rares.

Le bacille fusiforme est cultivable dans le bouillon ordinaire ou la gélose additionnés d'un tiers de liquide d'ascite, de sérum humain, de liquide d'hydrocèle, etc. Les cultures dégagent une odeur fétide. Le spirille n'est pas cultivable à l'air ou dans le vide.

II.

Il existe deux formes cliniques de l'angine, l'une diphtéroïde, très rare, que j'ai rencontrée dans 2 pour 100 des cas; l'autre, ulcéro-membraneuse, la plus commune.

1 *La première forme* simule beaucoup la diphtérie. Elle débute par une légère douleur pharyngée et on constate un petit placard blanchâtre, d'abord mince, puis plus épais, qui s'élargit et repose sur la muqueuse rouge et enflammée. Cette membrane peu atteindre un ou deux centimètres de diamètre; ses bords sont plus minces. Elle se laisse décoller et soulever. Elle est assez consistante. On voit alors qu'elle repose sur une surface exulcérée ou même saignante. Il existe de la dysphagie, une légère fétidité de l'haleine. Les ganglions sous-maxillaires sont habituellement tuméfiés. Une fièvre légère accompagne le début de cette forme d'angine. La durée de celle-ci est de quatre à huit jours, environ. Cette variété est déterminée par le bacille fusiforme seul ou associé soit au streptocoque, soit au staphylocoque, etc.

2. *La deuxième forme* de l'angine est, à la fois, la plus commune et la plus importante. C'est la forme *ulcéro-membraneuse*. Elle est déterminée par l'association du bacille fusiforme et du spirille. Elle est annoncée par du malaise, de la courbature, de la céphalalgie, de la fièvre, pendant deux ou trois jours, avec rougeur d'une amygdale ou d'un pilier et sensation de picotement. Parfois on voit un léger enduit blanchâtre. La fièvre atteint habituellement 37° C., 38° C., 39° C., et quelquefois davantage. Chez les enfants, il y a de l'agitation nocturne.

L'examen du pharynx montre bientôt une fausse membrane grisâtre ou jaunâtre, molle, peu épaisse, peu adhérente, sous laquelle la muqueuse est déjà exulcérée. L'amygdale est le siège le plus habituel de cette lésion. La fausse membrane augmente d'épaisseur (un millimètre et davantage); elle est molle, friable, facile à enlever et, vers le quatrième jour, elle repose sur une ulcération plus ou moins profonde, irrégulière, saignant facilement. L'amygdale est rouge, hypertrophiée, parfois de consistance assez dure. L'haleine du malade est particulièrement fétide. La langue est saburrale. La secrétion salivaire est exagérée. La déglutition est pénible, douloureuse. Les ganglions sous-maxillaires sont plus ou moins tuméfiés et sensibles dans les cas sérieux ou moyens; ils sont peu gonflés ou même nuls dans les formes légères ou chroniques. Cette angine finit par guérir au bout de huit à quinze jours; mais, chez certains malades, elle prend une marche chronique et peut persister, avec des alternatives d'amélioration et d'exacerbation pendant un mois, deux mois, et même six mois. Toutefois, ces cas, bien soignés, guérissent rapidement. J'ai observé dans 4 pour 100 des cas une amygdalite double. Il n'est pas rare d'observer la coexistence d'une stomatite ou gingivite de même nature fuso-spirillaire. Le processus ulcéreux déterminé par ces microbes est, quelquefois, très envahissant. Il peut gagner le voile du palais, la muqueuse de la langue, le pilier, après avoir intéressé la tonsille entière. Il peut même détruire entièrement la luette (Auché). Ces formes graves sont, cependant, exceptionnelles.

Les *érythèmes* scarlatiniforme, noueux, polymorphe, le purpura, ont été observés plus souvent. Il peut exister du *pseudo-rhumatisme* ordinairement bénin. L'embarras gastrique, l'inappétence, la constipation, sont fréquents. Je n'ai pas constaté de complications respiratoires. Cependant certaines complications graves peuvent apparaître dans le cours de cette angine: albuminurie, myocardite, endocardite, etc. Mais ces complications résultent d'une infection surajoutée due, le plus souvent, au streptocoque.

III.

Le *diagnostic* de l'angine à bacilles fusiformes peut être assez difficile dans la forme diphtéroïde de la maladie, ou bien à la première période de la forme ulcéro-membraneuse. La fausse membrane, l'adénite, la fièvre, peuvent faire penser à la diphtérie. Mais l'examen bactériologique montre immédiatement qu'il ne s'agit pas de diphtérie et que le bacille de Löffler est absent. Il importe de savoir, cependant, qu'il existe des diphtéries associées dans lesquelles le bacille de Löffler, au lieu d'être conjugué avec le streptocoque, le staphylocoque, etc. (comme c'est le cas le plus fréquent), est associé avec la symbiose fuso-spirillaire. Dans ces cas la fausse membrane repose sur une ulcération plus ou moins évidente et la culture, ainsi que l'examen microscopique, viennent élucider le diagnostic.

A la *période d'état* de l'angine ulcéro-membraneuse, les signes sont caractéristiques. Peut-être pourrait-on penser à la diphtérie si l'ulcération est peu profonde. Il est inutile de faire remarquer que la sérothérapie antidiphtérique est sans résultats et qu'il ne faut jamais négliger de pratiquer l'examen bactériologique de l'exsudat pseudo-membraneux. Les angines dues aux autres microbes: streptocoque, staphylocoque, pneumocoque, colibacille, leptothrix, oïdium, etc., ainsi que les angines que j'ai appelées polymicrobiennes, n'offrent pas, d'habitude, les caractères cliniques de l'angine à bacilles fusiformes, avec son enduit jaunâtre ou crayeux, son ulcération sous-jacente, l'odeur très fétide de la bouche, l'adénite. Les microbes spécifiques de l'angine de Vincent font, d'ailleurs, défaut. Parfois on trouve ça et là quelques bacilles fusiformes dans les préparations microscopiques des angines polymicrobiennes, mais il n'y a pas, en réalité, de

multiplication véritable de ces derniers microbes. Leur présence s'explique parce que le bacille fusiforme, de même que d'autres microbes pathogènes, est un hôte normal de la bouche des sujets sains. Cette dernière remarque s'applique aux lésions ulcéreuses diverses de la bouche et du pharynx, qui peuvent tantôt montrer quelques bacilles fusiformes, tantôt être littéralement envahies *secondairement* par l'infection fuso-spirillaire.

Une mention spéciale doit être faite pour le diagnostic différentiel de mon angine avec le chancre syphilitique ou les syphilides ulcéreuses de l'amygdale. L'angine à bacilles fusiformes a certainement été, parfois, confondue avec la syphilis des amygdales. Il est à remarquer, d'ailleurs, que la tonsille sous-jacente à l'infection fuso-spirillaire est souvent congestionnée et d'une consistance assez dure, et l'on peut alors penser, en présence de l'ulcération et de l'adénite, qu'il s'agit d'un chancre syphilitique. Cependant cette dureté modérée de l'amygdale n'est pas constante et n'est jamais aussi nette que dans le chancre spécifique. Enfin l'examen bactériologique vient lever tous les doutes. Mais il est important de savoir que les lésions syphilitiques secondaires ou tertiaires peuvent être infectées secondairement par le bacille fusiforme et les spirilles; ces microbes semblent avoir une certaine prédilection pour les ulcérations syphilitiques du pharynx. Dans ces cas, il est plus difficile de reconnaître la nature syphilitique de l'ulcération, dissimulée sous la fausse membrane. Il faudra, naturellement, tenir compte des accidents simultanés d'origine spécifique: roséole, plaques muqueuses, alopécie. Dans la syphilis, les ganglions cervicaux sont tuméfiés en même temps que les ganglions sous-maxillaires. Enfin le traitement servira de "pierre de touche" ou de criterium essentiel. L'angine à bacilles fusiformes est guérie en quelques jours si l'on frictionne deux fois par jour la lésion avec un tampon imprégné de teinture d'iode. Ce traitement est sans effet s'il y a une lésion syphilitique sous-jacente. Inversement le mercure et l'iodure de potassium déterminent la guérison de l'ulcération syphilitique, même si elle est compliquée par l'infection fuso-spirillaire; ce traitement n'amène, au contraire, aucune amélioration de l'angine que j'ai décrite.

Bibliographie.—Athanasiu: L'Angine Ulcéro-membraneuse à Bacilles Fusiformes de Vincent, Thèse de Paris, 1900. Auché: Destruction complète de la Luette par le Processus Ulcéreux de l'Angine de Vincent, Gazette Hebdomadaire des Sciences Médicales, Bordeaux, Novembre, 1903. Baron: Zur Kentniss der Angina Exsudativa Ulcerosa, Archiv für Kinderheilkunde, Band xxxv., H. 3, p. 151. Bayer: Ueber Vincentsche Angina, Centralblatt für Laryngologie, Band xviii., p. 353. F. Beaudoin: Un Cas d'Angine de Vincent au Cours d'une Syphilis primaire, La Touraine Médicale, 15 Juillet, 1901. Bernard: Angine de Vincent, Lyon Médical, 1900, p. 483. Bernheim: Ueber eine Bakteriol. befund bei Stomatitis Ulcerosa, Centralblatt für Bakteriologie, Abt. I., Band xxiii., p. 177. Bonnus et Deguy: Sur l'Angine de Vincent, Journal des Praticiens, 19 Mai, 1900. Bosquier: Poussées d'Angine Ulcéro-membraneuse avec Bacilles Fusiformes de Vincent, Journal des Sciences Médicales de Lille, 1899, No. 18. E. Botella: Angine de Vincent et Chancre de l'Amygdale, Bolletino de Laringologia, Madrid, 1903–1904. H. W. Bruce: On Vincent's Angina, THE LANCET, 16 Juillet, 1904, p. 135. Carnot et Fournier: Sur un Cas d'Angine de Vincent, Société de Biologie, 1901. Chauffard: Traitement de l'Angine de Vincent par le Bleu de Méthylène, Société Médicale des Hôpitaux de Paris, 1901, 27 Déc., p. 1375. Chavigny: L'Angine de Vincent, Indépendance Médicale, 1901. Conrad: Ueber den heutigen Stand der Kenntnisse der Vincentschen Angina, Archiv für Laryngologie, Band xiv., p. 525. Costa: Sur la Contagion de l'Angine de Vincent, La Presse Médicale, 16 Déc., 1903. Costard: De l'Amygdalite à Bacilles Fusiformes, ou Maladie de Vincent, Thèse de Paris, 1900. Darier: Stomatite de Vincent, Journal de Médecine Interne, Juillet, 1903. Dopter: Un Cas d'Angine à Bacilles Fusiformes de Vincent, La Presse Médicale, 1898, No. 66, p. 74; L'Angine de Vincent, Gazette des Hôpitaux, 8 et 10 Mai, 1902; Contagiosité de l'Angine à Bacilles Fusiformes, Société Médicale des Hôpitaux de Paris, 1902. Faranella: Dos Casos de Angina de Vincent, Medic. y Cirurg., 1902, No. 30. Flacher: Angine à Bacilles Fusiformes et Spirilles de Vincent. American Journal of the Medical Sciences, 1903, pp. 438–43. Forcheimer: St. Paul Medical Journal, Juin, 1901. Fotiadès: Stomatite et Angine avec constatation du Bacille Fusiforme de Vincent, Archives Provinciales de Médecine, 1899, No. 47. Freyche: Etude sur l'Angine diphtéroïde et ulcéreuse de Vincent, Thèse de Toulouse, 1899. Gallois et Courcoux: Bacille Diphtérique dans certains Cas d'Angine de Vincent, Société Médicale des Hôpitaux de Paris, Mai, 1903. Gräupner: Ueber Angina Diphteroides, Münchener Medicinische Wochenschrift, 1902, p. 727. Hecht: Fälle von Vincentscher Angina, Monatschrift für Ohrenheilkunde, 1901, No. 5. O. Hess: Die Angina Vincenti, Deutsche Medicinische Wochenschrift, 1903, No. 42, p. 749. Iwanoff: Ueber die Angina Vincenti, etc., Petersburger Medicinische Wochenschrift, 1902, p. 32. Jacques: Angine de Vincent chez l'Enfant, Revue Hebdomadaire, Juin, 1899. Jürgens: Berliner Klinische Wochenschrift, 13 Juin, 1904. Lämmerhirt: Zur Kasuistik der Angina Vincenti, sive Diphteroides, Deutsche Medicinische Wochenschrift, 1902, No. 28, p. 442. Lansac: Sur un Cas d'Angine de Vincent, Société de Biologie, 1er Juin, 1901. Lesueur: Thèse de Paris, 1900. Letulle: Sur un Cas d'Angine de Vincent, La Presse Médicale, 29 Déc., 1900. Lichtwitz et Sabrazès: Bacilles Fusiformes de Vincent dans un Cas d'Amygdalite Ulcéreuse, &c., Archives Internationales de Laryngologie, Otologie, et Rhinologie, 1899, No. 3. Malherbe: Sur le Traitement de l'Angine de Vincent, Gazette Médicale de Nantes, 28 Juillet, 1902. Manicatide und Vranialici: Fall von Angina mit Spindelformigen Bacillen und Spirochäten (Vincent), Münchener Medicinische Wochenschrift, 1902, No. 16, p. 673. Marfan: Diagnostic de l'Angine diphtérique, Gazette des Hôpitaux, 21 Mars, 1903, No. 34. Mayer: Affections of the Mouth and Throat associated with the Fusiform Bacillus and Spirillum of Vincent, American Journal of the Medical Sciences, vol. cxxiii., 1902, p. 187. De Montigny: Recherches Cliniques sur l'Angine de Vincent, Thèse de Paris, 1903. Niclot et Marotte: L'Angine de Vincent, Médecine Moderne, 5 Juin, 1901. Nicolle: Angine Ulcéro-membraneuse à Bacilles Fusiformes et Spirilles (Angine de Vincent), Archives Provinciales de Médecine, 1899. Oberwinther: Ueber Angina Ulcerosa, Münchener Medicinische Wochenschrift, 1904, No. 11, p. 500. Panoff: Thèse de Nancy, 1899. Queyrat: Angine de Vincent, Société Médicale des Hôpitaux de Paris, 18 Nov., 1904, Janvier, 1905, et 3 Févr., 1905. Rispal: Angine Diphtéroïde à Bacilles Fusiformes et Spirilles de Vincent, La Presse Médicale, No. 95, p. 146, 1898. Royster: Ulcération de l'Amygdale avec Bacilles de Vincent, Archiv of Pediatrics, Août, 1903, No. 9. Sacquépée: Cinq Cas d'Angine à Bacilles Fusiformes de Vincent, Archives Internationales de Laryngologie, Otologie, et Rhinologie, 1899. Salomon: Bakter. befund bei Stomatitis und Tonsillitis Ulcerosa, Deutsche Medicinische Wochenschrift, 1899, No. 19; Weitere Mitteilungen über Spirochäten-bacillenangina, ibid., 1901, No. 34. Schneider: Angine à Bacilles Fusiformes de Vincent, La Presse Médicale, 17 Juin, 1899. Silberschmidt: Ueber d. befund von Spiesformigen Bacillen (Bacillus Fusiformis Vincent) und von Spirillen in einem Oberschenkelabscess, Centralblatt für Bakteriologie, Band xxx., No. 4, p. 159. Simonin: Les Complications de l'Angine de Vincent et leur pathogénie, Société Médicale des Hôpitaux de Paris, 6 Déc., 1901. Siredey: Un Cas d'Angine de Vincent, Société Médicale des Hôpitaux de Paris, 25 Oct., 1901. Siredey et Mantoux: Stomatite de Vincent, La Parole, Mars, 1902, No. 3. Smirnoff: Ein Fall von Ulceröser Angina mit Vincentscher Bacillen, Medizinskoie Obosrenie, 1902, No. 4. Sobel and Herrmann: Ulcero-membranous Angina with the Fusiform Bacillus (Vincent), a report of 12 cases in children, New York Medical Journal, vol. lxxiv., 1901, p. 1037. Speranski: Ein Fall von Ulceröser Angina mit Vincentschen Bacillen, Die Medicinische Woche, 1901, No. 16, p. 173. De Sucklin: Archives de Médecine Expérimentale, 1er Mai, 1900, p. 269, et Centralblatt für Bakteriologie, Abt. 1, Band xxiv., p. 612. Stolkind: Vier Fälle von Ulceröser Vincentscher Angina, ref. St. Petersburger Medicinische Wochenschrift, 1903. Surmont: La Stomatite Ulcéreuse, ses Rapports avec l'Angine de Vincent, Echo Médical du Nord, 6 Janv., 1901. Tarassewitch: Ueber Vincentsche Angina, Russisches Archiv für Bakteriologie und Pathologie. Tobben: Angine de Vincent, Berliner Klinische Wochenschrift, 23 Mai, 1904. Tschamer Schwarz: Ein Fall von Angina Vincenti, ref. Petersburger Medicinische Wochenschrift, 1903, p. 76. Vigdortchik: Wratch Gaz. St. Petersb., 1901, viii., p. 689. H. Vincent: Sur l'Etiologie et sur les Lésions Anatomo-pathologiques de la Pourriture d'Hôpital (avec mention de l'angine à bacilles fusiformes et description de son microbe), Annales de l'Institut Pasteur, 29 Oct., 1896, p. 692; Sur une Forme particulière d'Angine Diphtéroïde (angine à bacilles fusiformes), Société Médicale des Hôpitaux de Paris, 11 Mars, 1898; La Presse Médicale, 12 Mars, 1898; Nouvelles Recherches sur l'Angine à Bacilles Fusiformes, Société Médicale des Hôpitaux de Paris, 13 Janv., 1899, et Archives Internationales de Laryngologie, Otologie et Rhinologie, Mars, 1899; Cas prolongé d'Angine à Spirilles et Bacilles Fusiformes, Société Médicale des Hôpitaux de Paris, 1er Févr., 1901; Recherches Bactériologiques sur l'Angine à Bacilles Fusiformes, Annales de l'Institut Pasteur, 2 Août, 1899; Sur la Culture et l'Inoculation du Bacille Fusiforme, Société de Biologie, 23 Mars, 1901; Syphilis et Bacille Fusiforme, La Presse Médicale, 1er Juin, 1901; Sur un Cas de contagion de l'Angine à Spirilles et Bacilles Fusiformes, Société Médicale des Hôpitaux de Paris, 2 Mai, 1902; Diphtérie et Bacille Fusiforme, Société Médicale des Hôpitaux de Paris, 5 Juin, 1903; Sur la nature de la Stomatite Ulcéro-membraneuse, Société de Biologie, Janv., 1904; Recherches sur la Stomatite Ulcéro-membraneuse primitive, Etude clinique et bactériologique Archives Internationales de Laryngologie, Otologie, et Rhinologie, Mars, 1904; Apropos de l'Angine à Bacilles Fusiformes, Question de priorité, ibid., 1er Janv., 1905; Inoculabilité du Bacille Fusiforme au sujet Sain, Société Médicale des Hôpitaux de Paris (Discussion), 10 Févr., 1905; Sur la Non-identité du Bacille Fusiforme et du Spirillum Sputigenum, Société de Biologie, 18 Mars, 1905; Fréquence comparée de l'Angine à Bacilles Fusiformes, La Presse Médicale, 29 Mars, 1905. Widal et Darré: Angine de Vincent et Stomatite Ulcéro-membraneuse, Société Médicale des Hôpitaux de Paris, 18 Nov., 1904, et Archives Internationales de Laryngologie, Otologie, et Rhinologie, 1905, p. 51. Zwillinger: Ein Fall von Ulceröser Vincentschen Tonsillitis, Soc. Rhino-Laryngologique Hongroise, 23 Nov., 1904.

Val de Grâce, Paris.

TREATMENT OF COMPLETE UTERINE AND VAGINAL PROLAPSE.[1]

BY FREDERICK HOLME WIGGIN, M.D.,

FORMERLY VICE-PRESIDENT OF THE AMERICAN MEDICAL ASSOCIATION AND PRESIDENT OF THE NEW YORK STATE MEDICAL ASSOCIATION; FELLOW OF THE NEW YORK ACADEMY OF MEDICINE; VISITING SURGEON TO THE NEW YORK CITY HOSPITAL; AND GYNÆCOLOGIST TO ST. ELIZABETH'S HOSPITAL, ETC.

So much diversity of opinion still exists among gynecic surgeons as to the proper treatment to be employed for the cure of complete uterine and vaginal prolapse that it seems timely again to bring this subject forward for discussion; and for this reason I desire to place before you for consideration the method of treatment which in my experience has proved the most satisfactory. Before

[1] A paper read at the annual meeting of the American Medical Association, held at Atlantic City, N.J., on June 9th, 1904, before the Section on Obstetrics and Diseases of Women.

doing this, however, a few words in regard to the pathology of the disorder may be of interest. The condition is best described as a reducible hernia through the pelvic floor, the sac being the inverted vagina, containing, besides the uterus, the tubes, the ovaries, the bladder, and the rectum, a large portion of the small intestines. The causation of the disorder, as is well known, is primarily a separation—often submucous—of the tendons of the muscles forming the pelvic floor where they unite in the median line and is usually due to the passage of the child's head during parturition. This separation of the tissues, which hold the rectum in its proper position, allows the lower anterior portion of the gut to bulge upward and forward into the vagina, pushing the vaginal tissues before it. This abnormal position of the bowel is increased by every act of defæcation and straining at stool and is also added to by the lifting of heavy weights. As the muscular force employed follows the line of least resistance it tends in these cases not to expel the bowel contents through the anus, as it should, but instead to force the gut forward through the hernial opening into the vagina. The difficulty experienced by the sufferer in emptying her rectum causes her to exert an ever-increasing force and gradually and steadily, day by day, the rectocele increases in size, force in a downward direction being necessarily applied to the attached uterus and its ligaments, which in a normal condition serve simply as stays holding it in place, are gradually stretched and lengthened, allowing greater freedom of position to the descending organ. As the uterus descends the bladder goes with it. The descending process is hastened, after it has fairly begun, by the added weight of the small intestines, which being contained largely in the pelvis find their way by gravity to the lowest point. Thus after a period of a longer or shorter duration, varying usually in accordance with the natural vigour of the patient and the amount and character of the work she is called upon by reason of her environment to perform, a complete inversion of the vagina occurs and a hernial sac of large size appears outside the body and we have the condition known as complete uterine and vaginal prolapse to deal with. This complete form of the disease does not, as a rule, appear until rather late in life, although the patient has probably suffered from much discomfort and disability for many years.

In the surgical treatment of this disorder much ingenuity has been displayed. Various operations on the anterior and posterior vaginal walls, as well as the removal of the uterus in whole or in part, have been recommended, but unfortunately without very satisfactory results. In my opinion, these disappointing results have been due to the operator's failure in most instances to recognise the fact that the vaginal wall in these cases is a hernial sac with other contents than the uterus, tubes, ovaries, bladder and rectum, and that consequently the simple repair of the external perineal body, the removal of a larger or smaller portion of the vaginal walls, or even the removal of the uterus itself, would not correct the greatest cause of the difficulty—namely, the abnormal position of the small intestines. In the elderly patients suffering from this disease who have come under my observation, many of them having external tumours of large size, the uterus has not been found abnormally enlarged and consequently could not be considered a factor in the causation of the trouble and many patients have come under observation upon whom a hysterectomy for the cure of this disorder had been previously performed by other surgeons who stated that their tumours were larger than before operation.

In view of the foregoing facts it seems clear that the operative procedures required for the successful treatment of the class of cases under consideration are those that will first obliterate the inverted and stretched vaginal wall—which is in reality a hernial sac—and then restore the damaged perineal structures and distended anterior vaginal wall as nearly as possible to their normal condition. The technique which has, in my experience, best answered these requirements has been the following. The patient on coming under observation is placed in bed in the recumbent posture and the tumour is reduced, gravity being employed to help retain the parts in their normal position by raising the foot of the bed about six inches. Tampons moistened with glycozone are placed in position and the parts treated until all the ulcerated portions of the vaginal walls have healed, the general condition of the patient being meanwhile carefully looked after. The next step in the procedure is the performance of a laparotomy after the usual preparations have been made, the patient being placed in the Trendelenburg posture before the abdomen is opened for the purpose of obtaining the aid of gravity in drawing the parts back into their normal position. The bowels are usually in these cases found to be more or less attached to the vaginal wall by adhesions which must be broken up. The uterus, which, as has been previously stated, is in elderly women usually small, is found and pulled upward by the aid of bullet forceps, drawing the vaginal wall upward also. When this has been accomplished a needle armed with large size kangaroo tendon is passed through the fibres of the uterus at the point of its attachment to the round ligament and carried down the broad ligament in the form of a purse-string suture (see Fig. 1) and back again, the needle being

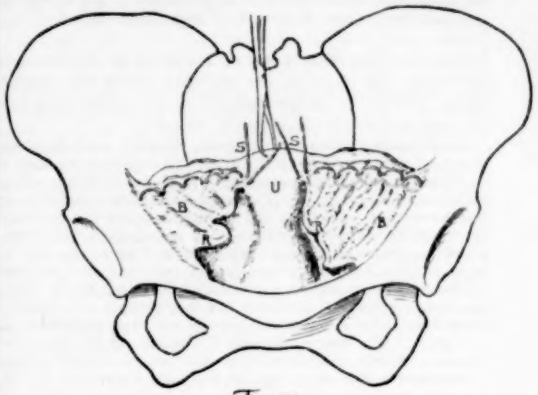


Fig. I

B B, Broad ligament. B B, Round ligament. S S, Sutures. U, Uterus.

finally made to emerge at about the point of entrance, so that when the two ends of the suture are drawn upon the broad ligament on that side is folded up and drawn together, thus doing away with its excessive length and giving the uterus a new point of attachment near the insertion of this ligament at the pelvic brim (see Fig. 2).

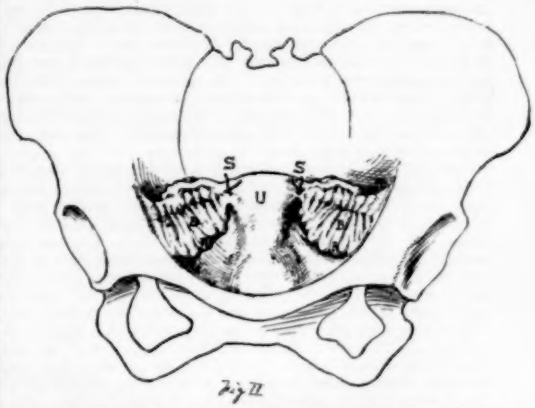


Fig. II

B B, Broad ligament. B B, Round ligament. S S, Sutures. U, Uterus.

The same process is repeated on the opposite side. The abdominal cavity is then flushed with saline solution, some of which is allowed to remain, and the wound in the abdominal wall is rapidly closed by means of buried sutures and protected by a celloidin dressing. If the patient is then in ordinarily good condition repair of the pelvic floor and reduction in size of the anterior vaginal wall are undertaken. In my experience there is usually no difficulty in accomplishing this, for all the operative measures necessary to

make a complete cure can easily be performed in 40 minutes. In these operations time is an important factor, as most of the patients are elderly and do not bear prolonged operative procedures well, or those involving much loss of blood, *hence the importance of not removing the uterus in whole or in part when it is not at fault in the treatment of this disorder.* Many operations such as have just been described have been performed by me during the last few years on women whose ages ranged from 60 to 83 years, without mortality and with most satisfactory results.

New York City.

CARCINOMA OF THE UTERUS AND ITS SURGICAL TREATMENT.

BY EDWARD T. THRING, F.R.C.S. ENG., L.R.C.P. LOND.,
SURGEON TO THE PRINCE ALFRED HOSPITAL, SYDNEY, ETC.

THE following brief notes of six cases of carcinoma of the uterus are given simply as examples of the method which, I believe, gives the best final result in those instances in which removal of the uterus is justified.

CASE 1.—The patient, a nullipara, married, aged 32 years, was first seen on Dec. 15th, 1894. She gave a history of repeated attacks of pelvic peritonitis, probably the result of an infective salpingitis. The menses had been regular every four weeks; of late there had been occasional blood-stained discharge between the periods. On examination the uterus was fixed and retroverted; both ovaries were cystic and of about the size of a large orange. From the posterior lip of the cervix was a fungating mass which bled readily on being touched. A portion removed for microscopic examination showed it to be carcinoma. Operation was performed on Dec. 24th. The uterus, ovaries, Fallopian tubes, and broad ligament were removed; also the pelvic glands. On section under the microscope two glands from the left side showed carcinomatous change. Five months after the operation a small recurrent nodule was excised from the scar in the vault of the vagina. There was no further recurrence. The patient is now (Feb. 4th, 1905) quite well.

CASE 2.—The patient, a nullipara, married, aged 50 years, was first seen on Feb. 16th, 1897. She complained of pain in the left side of the pelvis. The menopause took place three years and three months previously; "nothing seen" for two years and three months, then a "flooding" occurred and since then there had been slight irregular bleedings. Of late a bad-smelling discharge had been present. On examination the uterus was still of normal size—i.e., not atrophied; it occupied a good position, was tender to touch, and slight bleeding occurred after examination. Operation was performed on March 19th. The uterus and appendages, together with the broad ligament and the pelvic glands, were removed. Two glands from the left side of the pelvis showed carcinomatous infiltration. This patient lived for six years well; she then became ill and died during the seventh year from "Bright's disease." She was not under my care at that time.

CASE 3.—The patient, married, aged 51 years, was first seen on August 12th, 1900. The menopause occurred seven years previously. Three months previously a "sudden gush" of blood took place; slight bleeding had been present ever since but no pain. On examination there was nothing abnormal in the thorax or abdomen. The uterus was of full size and not atrophied; there was an old cervical tear. The sound entered two and three-quarter inches, followed by blood from the os. Operation was performed on August 25th. The uterus and appendages, together with the broad ligament and the pelvic glands on both sides, were removed. The uterus showed carcinoma of the body growing from near the right cornu; also two glands from the right side of the pelvis were infiltrated by carcinomatous deposit. This patient is now (February, 1905) alive and well.

CASE 4.—The patient, a multipara, married, aged 46 years, was first seen on March 14th, 1900. The menses had been regular every four weeks. She had had a "watery discharge" for nearly six months; this was sometimes blood-stained. On examination a fungating ulcerated growth from the cervix was seen; this bled readily on being touched. The uterus was apparently free from adhesions. Operation was performed on March 21st. The uterus and appendages, together with the broad ligament and the pelvic glands on both sides, were removed. In this case there was carcinomatous infiltration of the glands from both the right and left sides, most marked, however, on the right. During the operation it was found to be easier to ligature the internal iliac artery of the right side than to reach the uterine artery far back; this also allowed greater freedom in dissecting out the pelvic glands. On the *fourth day* there was a leakage of urine into the vagina, although a considerable amount was also drawn off through the urethra. This leakage gradually diminished and ceased entirely on the twelfth day. I received a letter from this patient on Jan. 26th, 1905, in which she says that she is, and has been, perfectly well since her convalescence after the operation.

CASE 5.—The patient, a multipara, married, aged 33 years, was first seen on July 1st, 1901. There was a history of severe bleeding from the vagina. The patient was blanched. On examination there was found a fungating growth from the cervix. This was removed with a sharp spoon to control the bleeding temporarily. Operation was performed on July 19th. The uterus and appendages, with the broad ligament and pelvic glands, were removed. The glands on the right side were infiltrated with carcinomatous deposit. The fungating mass was a cylindrical-celled carcinoma. The patient is now (February, 1905) well.

CASE 6.—The patient, a multipara, married, aged 34 years, was first seen on Jan. 2nd, 1903. The menses had been regular every four weeks up to August, 1902, then "floodings" occurred at each period, also some bleeding between times. The patient was blanched and breathless. On examination a fungating bleeding growth from the cervix uteri could be seen. On bimanual examination a gland on the left side of the pelvis, of the size of a pigeon's egg, slightly moveable, could be felt. Operation was performed on Jan. 14th. The uterus and appendages, broad ligament, and pelvic glands were removed. The glands on both sides were infiltrated by carcinomatous deposit; this was more advanced in those of the left side. The patient when last seen a short time ago was well and there were no physical signs of recurrence.

I have given the above brief notes of these six instances of carcinoma of the uterus simply as illustrative cases. All occurred in my private practice and I was therefore able to follow them more closely than is usually possible in hospital practice. They are only a small number of those operated upon during the past ten years but they demonstrate the points which I wish to emphasize.

In each case the growth was examined microscopically. In each the pelvic glands were the seat of carcinomatous deposit secondary to the uterine growth. In one only could it be demonstrated before operation that there was involvement of pelvic glands—i.e., Case 6—the most recent one. The leakage of urine in Case 4 was, I believe, the result of trophic changes either in the base of the bladder or in the right ureter near the bladder and due to the fact that the right internal iliac artery itself was ligatured and not the anterior division of it or the uterine trunk. That there was no lesion at the operation is proved by the fact that there was no leakage until the fourth day after. I have seen this happen three times, and in each case the leakage only lasted a few days and ceased spontaneously, and in each of the three cases either the right or left internal iliac artery had been tied and divided. In two cases this was done to facilitate access to the deeper glands lying against the internal iliac vein; I have not met with any instance of septic cystitis spreading up along the ureters to the pelvis of the kidney, such as are recorded in the *Johns Hopkins Hospital Bulletin* for May, 1904. I think that this may be due to the fact that, recognising there must of necessity be a great deal of serous oozing after such an operation and also that, owing to the free removal of peritoneum, it is often difficult to obtain sufficient to cover over the exposed ureters and base of the bladder, I have made it a practice to pack the lower part of the pelvis lightly with a long strip of several thicknesses of iodoform gauze, bringing one end out into the vagina and so providing very free escape for the serum instead of the small drain which is apparently used at the Johns Hopkins Hospital in such cases.

The chief point, however, to which I desire to call attention is the fact that in all these cases the pelvic glands were more or less the seat of secondary carcinomatous deposit and that by no possibility could these glands have been removed had the ordinary vaginal operation of hysterectomy been performed. They can only be dissected out

through an abdominal incision. Further, I think it must be granted that in each of the six cases the patient's hope of "cure" would have been *nil* had the glands been allowed to remain and that although in only two cases has the five years' limit been well passed and in two others almost, but not quite, reached, still, not one of these four would now be alive or have survived at the outside more than three years. In the two more recently done cases it must be allowed that they, at all events, have a fair chance of "cure" which otherwise would have been an impossibility. On reading the report of the Gynæcological Section at the last meeting of the British Medical Association in England, I saw that Professor Olshausen definitely condemned any other major operative procedure in carcinoma of the uterus than vaginal hysterectomy, stating also that it was impossible to know beforehand whether the pelvic glands were involved or not except, of course, in advanced and inoperable cases. This was used as an argument in favour of vaginal hysterectomy and against any more radical operation. Surely it ought to be the other way about. The few cases I have cited, and many more could be adduced, seem to prove this. Another argument used against the more thorough and radical operation was its great mortality, as stated by its critics. During the past six years I have found it to be only slightly—i.e., less than 1 per cent.—above the 3½ per cent. or 4 per cent. mortality assigned to the vaginal operation. When one is dealing with cancer such an added risk is justifiable if the prospect of "cure" is greater, and that this must be so I think the cases I have quoted proved.

I am aware that in taking up this position I am in opposition to all the speakers, with two exceptions, on the occasion referred to, but the facts seem to justify the position I have taken for the past ten years—i.e., in all cases of carcinoma of the uterus, where a major operation is justified, the only one admissible is that one which gives the greatest hope of "cure," provided that the primary mortality is not too great. To leave the pelvic glands behind in such cases is to jeopardise the patient's chances of "cure," small as they may be at best. I have not given a detailed account of the steps of the operation as I usually do it because I have already done so in the *Journal of Obstetrics and Gynæcology of the British Empire* for January, 1903.

Sydney, New South Wales.

THE TECHNIQUE OF THE OPERATION FOR ADENOIDS AND ENLARGED TONSILS, WITH SOME PRACTICAL SUGGESTIONS.

BY FREDERICK C. CARLÉ, M.B. LOND., M.R.C.S. ENG.,
SENIOR CLINICAL ASSISTANT TO THE THROAT HOSPITAL, GOLDEN-SQUARE, W.

THE operation for adenoid growths and enlarged tonsils, now so extensively practised, is in reality a more complicated surgical procedure than it appears to the casual observer. To perform the operation efficiently so as to obtain the greatest amount of benefit to the patient and satisfaction to the surgeon considerable skill is required which is only obtained by extensive practice. Many untoward after-effects come before the surgeon's notice which he learns by experience how best to avoid. When one remembers that the completeness of the surgical measures employed is estimated by touch at the time of operation without directly viewing the area operated upon it will be readily appreciated that it is only by constant practice the surgeon is able to detect any incompleteness of his work by touch alone.

A description of the method of procedure as now practised at the Throat Hospital, Golden-square, will doubtless clear up many difficulties. The patient is anæsthetised with A.C.E. mixture on a flat table. Any pillow placed beneath the patient's head should be removed before the operation is commenced. The head thus maintains its normal relation to the trunk, upon which it is neither flexed nor extended. The importance of this I shall point out later. The degree of anæsthesia should be such that the conjunctival reflex is lost but not the reflex to light. A gag, preferably Doyen's, is now introduced by the anæsthetist and the mouth well opened. The head is steadied by the anæsthetist. The surgeon, standing on the right side of his patient, introduces the forefinger of his left hand to depress the tongue, thus bringing into view the soft palate and uvula. A StClair Thomson's adenoid curette is carefully passed behind the soft palate into the naso-pharynx. The handle of the curette is well depressed, so as to cause the cutting edge of the instrument to impinge against the base of the septum. The handle of the curette is carried through a semicircle, considerable pressure being used in making the cutting edge travel across the pharyngeal vault. In the latter part of the stroke so much pressure is not desirable for fear of cutting too deeply into the muscular tissue of the posterior pharyngeal wall. On withdrawing the instrument the mass of adenoid tissue is found in the cage of the instrument. The patient is immediately turned on to his right side, the nurse taking charge of the body and the anæsthetist of the head. The tonsils are next removed with a Heath's guillotine, the lower or right first. The surgeon defines the tonsil with his left forefinger, introduces the guillotine, and slips the ring over the organ. The handle of the instrument is carried well over to the opposite side, when the blade is pressed home and the tonsil removed. The upper or left is removed in a corresponding manner, the surgeon reversing his grasp of the handle in his right hand. The fauces and post-nasal space are then carefully palpated with the forefinger and any remaining adenoid tissue detected is removed with a Gottstein's curette. The violence of the bleeding is allowed to abate, when the patient is removed to bed in a prone position with the head low, a towel being held to the face during transit to catch any blood.

The practical points to which I would call attention are as follows. The horizontal position of the patient in the dorsal decubitus, the head being neither flexed nor extended. With the head extended the cervical curve of the spinal column is increased; in this position the operator is liable to cut deeply into the muscular structures of the posterior pharyngeal wall, which will be stripped down by the curette, leaving extensive tags of muscle and mucous membrane. These will slough and give rise to unpleasant symptoms in the after treatment, so making the patient more liable to acute middle-ear inflammation, a not infrequent result of the operation for adenoids. The lateral position favours the drainage of blood from the pharynx out through the mouth and in no way inconveniences the surgeon in removing the tonsils. In removing the tonsils a small guillotine is better than a large one, since the encircled organ is not so liable to slip out of the smaller ring. The lower end of the tonsil hangs down into the pharynx and does not merely project from between the faucial pillars. In removal, therefore, it is important to get the lower edge of the guillotine ring below this projection and to thread the ring on to the tonsil from below upwards. The posterior pharyngeal wall is best cleared at the end of the operation by scraping with the finger-nail from below upwards, thus avoiding tearing downwards of the posterior pharyngeal wall as is liable to follow the use of a curette. Large buried tonsils are best dealt with by removing a thin slice, followed by breaking down of the tonsil tissue with the finger. The cicatricial contraction following this method of procedure markedly reduces the size of the hypertrophied organ. The results obtained by the above method of operating are eminently satisfactory, any after ill-effect rarely occurring.

William-street, S.W.

ANATOMICAL PECULIARITIES OF A GALL-BLADDER AND AN APPENDIX.

BY FERGUSON LEMON, M.B., B.S. MELB.

AN instance of inclusion of a gall-bladder in the substance of the liver presented itself recently while Dr. W. K. Bouton of Melbourne was operating for gall-stones. After opening the abdomen in the manner recommended by Mr. A. W. Mayo Robson for this kind of operation the liver presented itself in the operation wound and what appeared to be a hydatid cyst was seen on the anterior surface of the right lobe—a slightly rounded elevation of pale yellowish colour. On lifting the liver forward a similar though somewhat more projecting eminence appeared on the posterior surface which when viewed through the substance of the liver was quite translucent. It was in

the normal position for a gall-bladder but the surfaces, both anterior and posterior, were continuous with the liver substance. As no gall-bladder could be discovered an incision was made on the posterior surface into the swelling when bile gushed out, and on further exploration two large gall-stones, one barrel-shaped and the other conical, were secured; there was an additional facet on the barrel-shaped stone showing that a third stone had been present, but as a probe passed the whole length of the common duct without striking one it had evidently been passed previously. The edge of the incision into the gall-bladder at the time of operation was at least three-eighths of an inch thick, the circularly arranged coat of the gall-bladder being marked off very definitely from the liver substance on the one hand and the mucosa, &c., of the bladder on the other. Having secured a specimen for microscopical examination the usual procedure for closing the abdomen and draining the gall bladder was undertaken. On examination with the naked eye after the usual hardening process the specimen measured about three millimetres and showed the same three layers as already mentioned. Under low power the layers were made up of (1) an outer thick layer of connective tissue, probably a continuation of Glisson's capsule; (2) a circularly arranged layer of connective tissue, evidently the true covering of the gall-bladder; and (3) the mucosa, muscular tissue, &c., of the gall-bladder. The thickness of the anterior surface of the bladder and liver appeared to be slightly more than that of the posterior surface, but no section was made of it.

Curiously enough on the same day at another operation for appendicitis a divergence from the normal was seen in the appendix. On lifting the cæcum into view a small elevation on the anterior surface of the cæcum, about five inches from the extremity of the gut, was seen from which a little pus oozed. At first sight it looked like a perforation of the cæcum itself, as no trace of the appendix connected with it could be seen, but on further examination a little loop of appendix with a diameter of half an inch sprang from the extremity of the gut and, passing upwards, appeared to end in the cæcum half an inch away from its origin. No elevation appeared on the smooth peritoneal surface to indicate that the loop had any connexion with the perforated elevation four and a half inches distant. However, taking the loop as a guide and carefully dissecting away the peritoneum the appendix was traced till it ended in the elevation. The appendix was then stripped off the cæcum and removed in the ordinary manner. The exposed surface beneath was the muscular tissue of the cæcum and it bled freely. After careful application of a continuous suture of fine catgut through the free edges of the peritoneum, including some of the muscular layer, the bleeding was stopped, and for further security a second row was inserted invaginating the first and including the stump of the appendix. The abdomen was then closed.

Both cases did excellently. I am indebted to Dr. Bouton for permission to publish them.

Hawthorn, Victoria, Australia.

CÆSAREAN SECTION FOR CONGENITAL MALFORMATION OF THE CERVIX UTERI; RECOVERY.

BY H. TRAILL SKAE, M.B., CH.B. ABERD.,
HONORARY DISTRICT SURGEON TO THE ROYAL MATERNITY CHARITY.

THE patient, aged 24 years, married, pregnant for the first time, was taken in labour early on June 12th, 1904, being then seven and a half months pregnant. She was a well-built, healthy woman. Her menstrual history was normal except that she sometimes had a good deal of pain. She was seen about 1 P.M. by a medical man of much experience who found an apparent absence of the cervix but did not interfere. At 9 P.M. he handed the patient into the care of my partner, Dr. W. D. G. Mulloy, who subsequently asked me to examine her with a view to operation. The patient had then been in strong labour for about 12 hours and was becoming exhausted. The liquor amnii was stated to have been dribbling away all day. The patient was emphatic in saying that she had felt the child move a few hours before.

On examination at 10.30 P.M. pains were found to be frequent and sharp but of short duration. The patient was a well-formed woman with no abnormality of the bony pelvis. The fundus uteri was one and a half inches above the umbilicus (most of the liquor amnii had dribbled away). The fœtal head could be felt above the pubes. The external genitals were normal. The vagina was unusually short, the finger being brought to a standstill quite unexpectedly, and just for a moment the impression of total absence of a cervix was strikingly given. The vaginal walls were quite lax and undilated. On further examination it was found that the vaginal cervix was represented by a small flat warty projection, somewhat irregular and quite hard and firm. At its centre was the os—a small opening hardly large enough to admit a probe. This projection was placed almost in contact with the rectal wall, the posterior fornix being almost unrepresented. A slimy purulent discharge was oozing from the opening. The fœtal head could not be distinctly felt through the vagina. No fœtal movements could be felt and the heart sounds were not to be heard. It was evident that there would be much difficulty in introducing any instrument to dilate the os and further, that any attempt to dilate would inevitably result in rupture into the rectum. And as it appeared advisable to sterilise the patient by tying and dividing the Fallopian tubes abdominal Cæsarean section was decided upon. (Permission to sterilise was, however, subsequently refused.) Sedatives were given to enable the patient to get some rest.

At 11 A.M. on the next day chloroform was administered by Dr. R. Purdie, the patient having been prepared in the usual way, and Dr. Mulloy assisted me in the operation. The abdomen and uterus were opened in the middle line, an elastic ligature being placed round the latter. This tourniquet had afterwards to be temporarily loosened as it was found to have caught the fœtal scalp; bleeding, however, was readily controlled with the hands. The fœtus had evidently been dead for some days as putrefactive decomposition was well marked. The placenta, attached to the posterior wall of the uterus, was soft and foul-smelling—quite putrid. The uterus was emptied and scraped and then swabbed with perchloride solution (1 in 2000) followed by sterilised water. With considerable difficulty a narrow strip of gauze was forced into the vagina, about one and a half inches projecting into the uterus to act as a drain. The uterus was closed with deep and superficial sutures and contracted well. The abdominal wall was sutured in one layer and dressed. Vaginal douches of izal were given twice daily. There was a little feverishness for some days owing to the imperfect drainage from the uterus. The gauze drain was expelled on the fifth day. The perchloride swabbing caused no ill-effects and the patient made a good recovery.

There was no history of any malformation in the patient's family.

Hampstead, N.W.

Medical Societies.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

A Case of "Splenomegalic" or "Myelopathic" Polycythæmia with True Plethora and Arterial Hypertonia, without Cyanosis.

A MEETING of this society was held on May 9th, Mr. H. T. BUTLIN, Vice-President, being in the chair.

Dr. F. PARKES WEBER read a paper on a case of "Splenomegalic" or "Myelopathic" Polycythæmia with True Plethora and Arterial Hypertonia, without Cyanosis, which is published in full in this issue of THE LANCET.

Dr. J. S. HALDANE agreed that all facts pointed to an increase in the activity of the bone marrow as the cause of the polycythæmia. The method of determining the total volume of blood by the carbon-monoxide method gave results which were identical with results obtained by older methods. He referred to the extraordinary constancy of the ratio of the hæmoglobin and of the total blood volume to the body weight under various conditions. In the case under consideration, however, the blood volume was nearly double the normal ratio. The patient's condition was similar to that of an animal into which blood from another animal had been injected—there were an increase in the percentage of hæmoglobin and an enormous increase in the number of blood cells.

He suggested that extensive bleeding might be resorted to in treatment of this condition.

Dr. A. J. WHITING referred to the enlargement of the spleen in this condition and said that experimentally by copious bleeding of animals the bone marrow underwent hypertrophy and at the same time the spleen became swollen and of a rosy red colour and micro-copically was hardly distinguishable from bone marrow. He asked whether the spleen had been examined in Dr. Parkes Weber's first case and what changes had been found.

Dr. A. E. BOYCOTT said that he had dealt only with the pathology of the blood. Apart from the increase in the hæmoglobin and in the number of cells he had found a distinct alteration in the size of the blood cells, some being larger, and others smaller, than normal. The staining reaction of the cells was altered and a small number of nucleated red cells were constantly present. The polymorpho-neutrophile cells were always present in a high percentage.

Dr. PARKES WEBER, in reply, said that very little change could be seen in the sections of the spleen which had been examined. Only an increase of the spleen pulp was present.

MEDICAL SOCIETY OF LONDON.

General Meeting.—Discussion on the Perineal and Suprapubic Methods of Prostatectomy.

THE annual general meeting of this society was held on May 8th, Mr. JOHN LANGTON, the President, being in the chair.

The annual reports of the council, the honorary librarian, and the chairmen of the house and finance committees were received and adopted and the election of the officers and council for the ensuing year took place. The result of the ballot was as follows: President, Sir Lauder Brunton; Vice-Presidents, Dr. Edward J. Nix, Mr. Charters J. Symonds, Dr. William Pasteur, and Mr. C. W. Mansell Moullin; treasurer, Mr. David H. Goodsall; librarian, Dr. Arthur Francis Voelcker; honorary secretaries, Dr. J. S. Risien Russell and Mr. Cuthbert S. Wallace; honorary secretary for foreign correspondence, Dr. Humphry D. Rolleston; Council, Sir Hugh R. Beevor, Dr. J. Vincent Bell, Mr. C. Carter Braine, Dr. John F. H. Broadbent, Dr. John H. Bryant, Dr. Henry A. Caley, Mr. Albert Carless, Dr. Edmund Cautley, Dr. Harry Corner, Dr. W. J. Gow, Mr. Francis Jaffrey, Dr. Robert Jones, Mr. J. E. Lane, Mr. John Langton, Dr. Sidney Martin, Dr. H. H. Mills, Dr. Frederick S. Palmer, Mr. Walter G. Spencer, Dr. George C. Steele-Perkins, and Mr. H. J. Waring.

Mr. REGINALD HARRISON opened a discussion on the Perineal and Suprapubic Methods of Prostatectomy. No practical subject had occupied surgical attention more than that having for its object the improvement in the treatment of certain forms of prostatic hypertrophy when they occasioned serious obstruction to the natural expulsion of urine from the body. The surgical treatment of prostatic obstruction, as it occurred in the enlarged or adenomatous gland, might, he remarked, be discussed under three headings: (1) by catheterism alone as practised by the surgeon or the patient himself; (2) by perineal prostatectomy; and (3) by supra-prostatectomy. Where the first method sufficed for the wants and comfort of the individual the necessity or expediency for the removal of the prostate did not arise. Much more could now be done by strict antiseptic precautions to keep patients within this limit and there could be no question that many had thus been able to enjoy long and useful lives without taking the risk of an operation such as the removal of the prostate entailed. Though fully recognising the force of this consideration, which had had prominence given to it by Mr. G. Buckstone Browne and others, there could be no doubt that it was not possible to keep all prostatic cases within these limits. On the other hand, difficulty in the use of the catheter, pain, frequent and unrelieved desire, the continued formation of vesical stone in spite of its repeated removal by lithotrity, hæmorrhage, broken sleep and unrest, cystitis and offensive urine, in addition to other local and general states of sepsis, represented conditions which, when persistent, no catheter even with its modern accessories could adequately abate. It was in cases coming within this category that prostatectomy had been followed by striking and beneficial results. Opinions were divided as to the respective merits and applicability of the perineal and suprapubic methods. Perineal prostatectomy had for some years been largely practised both in France and America but hitherto had not found much favour in this country. It was, Mr. Harrison believed, of only limited application and in his practice had been almost entirely confined to some partial removal of the gland. For instance, by this route pendulous outgrowths of what was known as the middle lobe of the prostate, which by acting as a ball-valve obstructed micturition, might be dealt with satisfactorily. Complete extirpation of the prostate could also be effected by the perineum and many excellent results had been obtained. But Mr. Harrison had reason to think from cases that had come under his observation that some degree of incontinence of urine was not a very uncommon event after a completed perineal prostatectomy. Dr. George E. Goodfellow of San Francisco,[1] reviewing his experience of 73 patients operated upon by him by median perineal prostatectomy, had come to the same conclusion and other surgeons had recorded a somewhat similar experience. Dr. William White[2] of Philadelphia had stated, "Past experience does not justify the expectation that the results of prostatectomy by the perineal route will compare favourably with those of total enucleation." Turning next to the operation of complete suprapubic prostatectomy Mr. Harrison believed it to be the operation of choice in the majority of cases. It had many advantages. The operation could be completed with a knife, aided by the fingers, in a very few minutes. The bladder and prostate were approached from their most accessible position, where there was little or no risk of encountering hæmorrhage or of permanently damaging the sphincter or retentive apparatus of the bladder. The risk of traumatic urethral stricture was not great provided free drainage was afforded, for, as he had pointed out in the Lettsomian lectures of 1888, the density and contractility of the scar left after a complete or partial rupture from violence or laceration of the male urethra were in an inverse ratio to the direct drainage provided for the wound. He had never found difficulty or delay in healing after the suprapubic operation, provided that the drainage was sufficiently ample. Moreover, suprapubic prostatectomy had often been the means of bringing to light unsuspected stones contained within saccules and pouches of a presumed healthy bladder. Nor was it uncommon to find as age advanced and the prostate enlarged that the obstruction thus caused resulted in pouches in which concretions, small stones, and putrid urine might be detained. These considerations were of much importance in determining the precise nature of the operation that should be selected for the removal of the prostate. Partial suprapubic prostatectomy was an alternative operation but it had not, on the whole, proved a success. Instances had been recorded where, after partial removals in this way, the entire gland had had to be enucleated and this had been attended with good results. Enucleation with the finger alone as now practised had greatly simplified the process of complete removal and had rendered more secure that which was to some extent a matter of chance. In making reference to the distinctions between partial and complete extirpation Mr. Harrison did not wish to minimise in any degree the originality of Mr. Freyer's work but only referred to the point for the purpose of illustrating the wide difference in results between partial and complete removal of the gland however effected. In reference to the mortality attendant upon the two forms of prostatectomy under discussion Mr. Harrison was not disposed to think there was much difference in this respect between them; including all causes of death it was about 10 per cent; probably it was rather less with the perineal operation. He had no doubt that this percentage might be considerably reduced in many instances by an earlier prostatectomy and by the exclusion of malignant and other unsuitable cases where the operation had to be undertaken for distinctly palliative purposes.

Mr. W. BRUCE CLARKE, speaking from his own experience, agreed with Mr. Harrison that in all ordinary circumstances the suprapubic operation was the best. He was very glad it was becoming more usual to operate on cases earlier than formerly. The time of operation depended upon the degree and symptoms of obstruction. The symptoms varied probably because the gland became congested from time to time. The method of enucleation was discussed and the

[1] Journal of the American Medical Association, December, 1903.
[2] Annals of Surgery, December, 1904.

importance of getting into the right layer of the capsule was emphasised. This could not be done by incision through the mucous membrane. Incontinence of urine was, Mr. Bruce Clarke believed, unusual. In respect to the alternative, the perineal, operation there were a few cases in which this operation was justified, and in some cases a combination of the perineal and suprapubic methods might be adopted.

Mr. W. G. SPENCER (who exhibited microscopic specimens of Carcinoma, Fibrous Hardening, and other diseases of the Prostate) referred to certain cases in which he had found the perineal operation useful. Some were cases of prostatic obstruction and were instances of densely hard prostate without much enlargement, such as the diffuse fibroma of the prostate from which one of the microscopic sections had been taken. The various histological changes which might produce this condition were discussed and several cases were described in detail and the special methods which Mr. Spencer had adopted for the performance of perineal prostatectomy were described. In such cases of hard prostates it was difficult or impossible to separate the gland from its capsule. Benign lesions of the prostate might become malignant and this was another reason for dealing with the prostate in the manner suggested.

Mr. P. J. FREYER said that no real comparison could be made between the perineal and the suprapubic prostatectomy because they were applicable to such different kinds of cases. The latter was applicable to prostates enlarged to any extent but the former was applicable only to small hard prostates such as the cases referred to by Mr. Spencer. Accidents of various kinds were found after the perineal operation, such as rectal injury, rectal fistula, perineal fistula, orchitis, incontinence of urine, stricture, and loss of sexual power, which did not occur after the suprapubic method. In 110 cases which he had previously recorded the mortality had been about 10 per cent. but in 85 operations more recently performed the mortality had only been 5·5 per cent. This reduction depended on rapidity of operation, improved methods, and improved after-treatment.

Dr. H. T. HERRING remarked that there were four considerations which influenced the decision as to the operation performed—the mortality, questions of drainage, ease of operation, and after-effects. In general terms he recommended the suprapubic method, but advocated more careful preventive methods as obviating the necessity for any operation.

Mr. C. W. MANSELL MOULLIN thought that the choice of operation depended upon the size and condition of the prostate and also on the accessibility of the organ. In stout people it was very difficult to reach the prostate satisfactorily by the perineum but the choice of operation depended also upon the position and size of the enlargement, the kind and degree of the growth, and the question of drainage.

Mr. CUTHBERT S. WALLACE advocated the suprapubic method in most cases as being more satisfactory on general surgical principles. It was important to avoid, if possible, operation in states of active sepsis.

Dr. HEYWOOD SMITH referred to a case operated on suprapubically some time before in which no incontinence had ensued.

Mr. J. W. THOMSON WALKER discussed the limits of the two operations. The perineal operation was only available when the size of the prostate was small and the thickness and the depth of the perineum were moderate. The rapidity of the suprapubic operation was an important matter, not more than about 15 minutes being required.

Mr. JOHN G. PARDOE remarked that the important point to his mind was to be able to determine which kind of prostate could be enucleated. Fixity of the gland was a contra-indication to removal and generally indicated malignancy and he agreed with Mr. Spencer in thinking that such cases were best dealt with by perineal prostatectomy.

Mr. HARRISON replied.

OPHTHALMOLOGICAL SOCIETY.

Histological Changes in Choroiditis.—Results of Birth Injury to the Cornea.—Anterior Synechia of the Pupillary Membrane.—Bjerrum's Method of Testing the Field of Vision.—Pulsating Exophthalmos cured by Carotid Ligature.—Exhibition of Cases and Specimens.

AN ordinary meeting of this society was held on May 4th, Mr. JOHN TWEEDY, the President, being in the chair.

Dr. LESLIE BUCHANAN (Glasgow) showed a series of lantern slides illustrating Histological Changes in Lesions of the Choroid found after Removal of the Eyes for other Causes. The first was disseminated choroiditis of old standing exhibiting the appearances usually described. The second showed proliferative changes in an active stage affecting the pigment epithelium and others usually found in sympathetic ophthalmia. The third case exhibited well-marked irregular pigmentation of the choroid with fibro-cellular deposit on the surface of the retinal pigment epithelium, characterised by small black spots surrounded by a lighter areola and due to accumulation of pigment granules in the epithelial cells. The last part of the demonstration was concerned with the formation of the myopic conus which was shown to involve more than a mere stretching of the choroid as in two instances a fibro-cellular formation was found on the surface of the elastic lamina, in the one case vascular and in the other degenerated.

Dr. BUCHANAN also read notes of two cases illustrating Late Effects of Birth Injury to the Cornea. The first case was that of a girl, aged 12 years, with defective vision represented by $\frac{6}{9}$ and $\frac{5}{6}$ in the right and left eye respectively. Superficial observation indicated the presence of a corneal nebula but when examined with the ophthalmoscope and a 12 D. convex lens the appearance was found to be due to two peculiar lines at the posterior surface (refraction opacity), double outlined and altering with the position of the observer. The appearance so closely resembled that observed by Buchanan and Thomson in cases of birth injury that this matter was inquired into and was found to correspond exactly with that described by them in the Transactions of the Ophthalmological Society, 1903. In addition there was a high degree of astigmatism. The second case was similar and in this the astigmatism attracted attention. The corneal scars were so very faint that they were passed over in the first ophthalmoscopic examination. Ophthalmometric measurements were given in both cases and showed that the astigmatism was entirely corneal. The existence of a high degree of astigmatism and the involvement of one eye only should direct the ophthalmic surgeon to investigate the posterior surface of the cornea and the circumstances of birth.

Mr. A. H. H. SINCLAIR pointed out the advantages of Bjerrum's method for testing the visual field in clinical work, especially in the diagnosis of glaucoma. A large screen of black velvet, marked with lines of black thread in a radiating and concentric manner in order to determine the extent of the field in any direction, was employed. The fixation point was in the centre and the test objects of white ivory (1 — 20 millimetres in diameter) were carried across the screen by means of a slender black rod while the field of vision was mapped out by black pins and transferred to an ordinary perimeter chart. The advantage of the method was in obtaining a more discriminating chart of the centre of the field involving relative defects of great clinical importance which were not demonstrable by the ordinary perimeter. Lantern slides selected from a number of charts illustrated glaucoma in which the areas of vision and relative defect were conterminous at the blind spot, this being in all cases partly encircled by a horn-like projection of the area of highest visual acuity. Optic atrophy, on the other hand, though showing an even greater limitation of vision, had not this peculiarity, which was a permanent one, as shown by cases of several years' standing.

Dr. A. J. BALLANTYNE read a paper describing the Microscopic Examination of the Left Eye of an eight months Fœtus in which the pupillary membrane was almost complete and closely adherent at one part to the posterior surface of the cornea, the iris being attached in the same situation. The cornea itself was normal but the endothelial lining of the anterior chamber was almost entirely absent along the line of contact of iris and pupillary membrane with the back of the cornea though present elsewhere. Remains of the hyaloid artery and tunica vasculosa lentis were also present. Dr. Ballantyne attributed the adhesion to an inflammatory process which had led to destruction of parts of the endothelium of the anterior chamber and consequently of an intimate adhesion of its walls at this point, including the iris, the pupillary membrane, and the cornea. He alluded to 14 cases already recorded and discussed the theories put forward in favour of the one he had adopted.

Mr. S. JOHNSON TAYLOR reported a case of Pulsating Exophthalmos cured by ligature of the common carotid. The patient, a woman, aged 55 years, was first seen four years ago suffering from this condition on the right side with

a well-marked intracranial bruit, audible to herself and to the observer with the stethoscope. The bruit had appeared immediately after a fall seven weeks before the consultation, in which the patient had struck the *left* side of her head against a stone step, rendering herself unconscious for a few minutes and at the same time fracturing her collar bone. The proptosis developed gradually four weeks later. As the symptoms, severe pain, corneal ulceration, and conjunctivitis, became worse in spite of rest with spare diet and potassium iodide, Mr. Taylor ligatured the right common carotid at the patient's own home about nine weeks after the injury, the result being a complete and permanent cure, no untoward effect ever being manifested.

The following cases and specimens were shown:—

Mr. G. W. THOMPSON: Intra-ocular Swelling (Syphilitic).

Mr. J. JAMESON EVANS: Gumma of the Sclerotic.

Mr. C. H. WALKER: Enophthalmos (Congenital Syphilis).

Mr. L. J. PATON: Early Synostosis of Bones of the Skull with Optic Atrophy.

Mr. STORY: An example of a Couched Eye.

Mr. W. I. HANCOCK: Nodular Opacities on the Cornea in two members of a family.

Mr. E. T. COLLINS: Coloboma of the Eyelid.

OBSTETRICAL SOCIETY OF LONDON.

Mortality in Childbed both in Hospital and in General Practice. — Repeated Tubal Pregnancy. — Gonococcic Peritonitis.

A MEETING of this society was held on May 3rd, Dr. W. R. DAKIN, the President, being in the chair.

Dr. ROBERT BOXALL read a paper on Mortality in Childbed both in Hospital and in General Practice in which he offered the three following conclusions—namely: (1) the total death-rate from childbirth had not diminished in England and Wales, in Scotland, or in Ireland (where it was abnormally high as compared with the other divisions of the kingdom), but in London it had declined considerably; (2) the death-rate from accidents of childbirth had declined slightly in each division of the kingdom, but was abnormally high in Ireland and in London had markedly diminished; and (3) the death-rate from puerperal septic diseases had, if anything, shown a tendency to increase in each division of the kingdom, but in London had been declining for at least the last decade. In support of these opinions a large amount of statistical material was exhibited, chiefly compiled from the records of the General Lying-in Hospital, York-road, London, S.E. The first table showed the deliveries, deaths, and death-rate in childbed at the York-road Hospital for three successive periods—1833 to 1860, 1861 to 1877, and 1879 to 1904. During the first of these there were 5833 deliveries, with a death-rate from all causes of 3·08 per cent.; during the second there were 3773 deliveries, with a death-rate from all causes of 1·69 per cent.; and during the third there were 11,186 deliveries, with a death-rate from all causes of 0·47 per cent. Tables were also exhibited showing the death-rate from childbirth, from puerperal fever or metria, from accidents of childbirth, and from all causes, estimated for 10,000 children born alive; these tables gave the various particulars for London for each year from 1848 to 1903, for England and Wales for each year from 1847 to 1903, for Scotland for each year from 1855 to 1902, and for Ireland for each year from 1864 to 1903. Another table showed the mean mortality from childbirth and from puerperal sepsis and accidents of childbirth in London, England and Wales, Scotland and Ireland before 1880 and after 1881. From this it appeared that in London the total childbirth mortality per 10,000 births was 48·5 from 1848 to 1880, and 35·4 from 1881 to 1903; in England and Wales it was 48·7 from 1847 to 1880 and 48·4 from 1881 to 1903; in Scotland it was 49·8 from 1855 to 1880 and 50·0 from 1881 to 1902; and in Ireland it was 66·0 from 1864 to 1880 and 67·1 from 1881 to 1903. In other tables placed side by side for the purpose of comparison there was shown the mortality of childbirth and in childbed at the York-road Hospital for the last 25 years and in England and Wales for the years 1901-03. In spite of the large number of serious cases sent to hospital the deaths occurring under the head of accidents of childbirth and from septic disease were less in hospital than in private practice. While retaining the douche before delivery and immediately afterwards, routine douching during the greater part of the puerperium had been given up, and the later use of the douche took place once only—namely, on the fifth day. From August to October, 1888, an attempt was made to replace corrosive sublimate by salufer for douching but the results were very unsatisfactory. —Dr. A. L. GALABIN expressed an opinion on the conclusion that the death-rate from puerperal sepsis had, if anything, shown a tendency to increase in each division of the kingdom. He thought this conclusion too pessimistic and not supported by the charts. From statistics which he had himself published he concluded that there had been a distinct improvement in the mortality from puerperal septicæmia in England and Wales since 1880, which for the previous 25 years had been conspicuously absent, although it was not so great as might be desired, being rather less than half the improvement in septic diseases apart from the puerperium.—Dr. W. S. A. GRIFFITH said that it was obvious to every consultant that, as a rule, the disease was neither diagnosed nor was efficient treatment adopted until the patient was hopelessly septic and beyond the aid of successful treatment. He thought that some other cause must have been at work to account for the disastrous effects of douching with salufer. At Queen Charlotte's Hospital patients were frequently admitted in labour with infective vaginitis and it had not always been possible to disinfect these severe cases in time. He asked whether Dr. Boxall had met with the same difficulty and, if so, how he had so successfully dealt with it.—Dr. C. O. FOWLER alluded to the difficulty met with by medical practitioners in controlling the engagement of nurses for confinement cases in private practice. He considered that a nurse should never be asked to give a douche unless she had had a proper training. He deprecated the practice which largely prevailed of the nurse endeavouring to get the case over before the arrival of the medical man. He knew it was a common practice among some of those who ostensibly professed to follow aseptic methods and to disinfect their hands before making a vaginal examination to handle various articles between the disinfection and the examination regardless of the risk of reinfecting them.—Dr. C. J. CULLINGWORTH related the circumstances in which, on his initiative, salufer had for a time been used as a douche and for washing the external genitals. He was still in doubt as to whether the occurrence of sepsis just at that particular time was really due to the use of salufer. Of course, salufer itself could not convey infection, and if it was the cause of the outbreak it could only be so indirectly owing to the discontinuance of douching with corrosive sublimate. The great value of the paper to his mind was that it once more emphasised the unpleasant fact that whilst in lying-in hospitals sepsis had for all practical purposes been eliminated the prevalence of puerperal septicæmia in the country generally was just as great as ever. He believed that the great hope lay in the direction of better clinical instruction both for medical students and for midwives. He should rejoice if the passing of the Midwives Act had the effect of indirectly calling attention to the conditions under which English medical students obtained their practical instruction in midwifery.—Dr. C. E. PURSLOW thought that the great importance of cleansing and disinfecting the vulva of the parturient woman was sometimes likely to be neglected in private practice.—Dr. BOXALL, in reply, said that he hoped that Dr. Galabin's criticism would prove correct. The evidence of the disastrous effect of salufer as a douche rested not on the mortality so much as on the morbidity records as evidenced by the temperature charts. This to his mind appeared conclusive and warranted the belief that it would be better to omit the douche altogether than to use with it an inefficient antiseptic. He considered that a nurse unless properly trained should never be allowed to administer a douche after delivery. In his experience, also, notification of puerperal fever was rarely made till death was imminent. The Notification Act had been practically inoperative in many places so far as puerperal fever was concerned. Recognising the futility of attempting to determine the presence of gonorrhœal and of septic matter in the vagina in the case of patients admitted to hospital during labour the practice was followed of disinfecting the vulva and the vagina if possible before delivery and of douching with an antiseptic solution immediately afterwards. Under this treatment ophthalmia rarely occurred. It was satisfactory to find such a general consensus of opinion

among the Fellows of the society as to the necessity of improving the clinical teaching of the medical student in midwifery.

Dr. PURSLOW read a short account of a case of Repeated Tubal Pregnancy in which he had operated twice. On each occasion there was intraperitoneal hæmorrhage from the fimbriated extremity of the tube, after the patient had gone exactly a fortnight over the period.—Mr. ALBAN DORAN referred to a case in his own practice which had symptoms of tubal abortion on the right side and in which he operated a year later for tubal gestation on the left. He then found evidence of the former pregnancy.—Dr. HERBERT R. SPENCER said that he had operated on three cases of repeated tubal pregnancy, although he did not usually operate in early tubal gestation.

Mr. A. G. R. FOULERTON showed Microscopic Specimens from a case of Acute Peritonitis in which cultures of the micrococcus gonorrhœæ had also been obtained from the peritoneal exudation. The tubes and the ovaries of both sides were removed by operation. The micrococcus gonorrhœæ was found in the vaginal discharge and also in pure culture in the pus contained in the tubes. Histologically, the lining epithelium of the tubes showed but little change and a careful examination had so far failed to show any penetration of the gonococci either into the epithelial cells themselves or below the epithelial lining. He thought that infection of the peritoneum had been brought about by an acute kink near the middle of the right tube. The ostium abdominale of the left tube was apparently closed.

HUNTERIAN SOCIETY.

Discussion on Influenza.

MEETINGS of the Hunterian Society were held at the London Institution, Finsbury-square, on March 22nd and April 26th, when there was a discussion on Influenza, Dr. F. J. SMITH, the President, being in the chair.

The discussion was opened by Professor T. CLIFFORD ALLBUTT who reminded his hearers that he well remembered the outbreak of the epidemic in the "forties" and that he had heard something of the manner in which people suffered during the previous epidemic in the "thirties." Since those dates there had been epidemics but none that showed anything like the severity of the outbreak which commenced at the end of 1889 and the beginning of 1890. He reminded his hearers that influenza had been known fairly definitely from the twelfth century onwards. Having traced the course through the world of the 1889 epidemic he passed on to consider the contagious nature of the infection. Although contagion was now assumed as obvious this was not the general opinion in 1890, and Professor Allbutt gave examples from his experience as a Commissioner in Lunacy when he was able to observe the course of influenza in the lunatic asylums in England. Those persons who were in contact with the outer world—viz., the medical and domestic staff and the persons visiting them or the patients—were attacked at the rate of about 50 per cent. but on the inmates themselves, those who did not go out in the outer world, the incidence of the disease was relatively slight. Professor Allbutt then said that in his opinion the disease was propagated in the sputum and the spray from the respiratory tract and that unless a patient had respiratory affections he was not infectious. The speaker went on to point out that, like pulmonary tuberculosis, influenza might cause excavation of the lungs. Continuing his address, he passed on to consider the various symptoms, laying great stress upon the extreme suddenness with which influenza, as a rule, attacked its victims. The suddenness of the onset was often, he said, a useful point in the distinction between influenza and typhoid fever. As to treatment he said that it would be dealt with by other speakers and he himself was glad not to have to deal with that particular subject because he did not know that there was anything which could be called specific. Two points, however, he wished to impress upon them (1) that the patient ought to do what nobody, as a rule, would do—that was, go to bed at once and stop there until the acute phase was well passed; and (2) that during the long convalescence he would recommend what he might call a non-toxic diet—viz., milk, custards, and no meat.

Dr. H. FRANKLIN PARSONS gave an account of the epidemiology of the disease.

On April 26th Dr. W. BULLOCH, in discussing the bacteriology of the disease, said that the researches of bacteriologists culminated in 1892 with R. Pfeiffer's discovery of the hæmophilic microbe since known as the bacillus influenzæ. Practically no new facts have been added to Pfeiffer's original discovery. After searching trials he (Dr. Bulloch) had found that the bacillus only grew in the presence of hæmoglobin and that it was difficult to preserve the cultures alive. The important practical point in reference to Pfeiffer's bacillus was its parasitic character which rendered its cultivation a matter of difficulty. It was very susceptible to drying—a fact which altogether negatived the supposition that influenza was carried to great distances by the air. The extreme temperatures at which the bacillus grew were 27° and 42° C. This showed that in temperate climates, at any rate, the microbe did not multiply outside the body of man. Influenza was a highly contagious disease and in almost all cases it was propagated directly from man to man. As Pfeiffer showed, the bacillus influenzæ was found locally in the respiratory passages and it was an extreme rarity to find it in the circulation. Dr. Bulloch then emphasised the fact that whereas in the early "nineties" Pfeiffer's bacillus was frequently met with it had in recent years become much rarer although epidemics of catarrh—described as influenza—were still very prevalent. He (Dr. Bulloch) believed that what was called influenza clinically was not one disease but probably a series of diseases caused by different microbes among which a prominent place had to be given to the micrococcus catarrhalis and allied cocci. He then referred to the spread of these catarrhal diseases and emphasised the importance of the researches of Flügge and his assistants on the dissemination of microbes in droplets in the form of spray discharged from the mouth and nose during coughing, sneezing, &c. He then referred to the important question of immunity. Experiments on animals and observations in man showed that the immunity, if it existed, was of low degree and at the same time of slight duration. In all probability, however, some immunising influences were at work as in the course of time the microbe became attenuated. The continued occurrence of epidemics of influenza was referable to the fact that the microbes could persist for long periods in the respiratory passages of people who had had the disease. With a disease so eminently contagious, and considering the innumerable chances of infection and the general disposition of man to the disease, a satisfactory prophylaxis was almost impossible.

Dr. T. GLOVER LYON, in discussing the clinico-pathology of the disease, said that the most striking feature of influenza was the multiplicity of symptoms and the variety of combinations of them in different cases. He believed that the poison affected all the tissues of the body but chiefly those in a bad state of nutrition; in other words, the weak points. It attacked specifically the central nervous system and might well be named centro-neural fever. In slight cases the symptoms were referable alone to these organs and in more severe cases the nerve centres modified the symptoms displayed in other parts. An important condition sometimes arising was vaso-motor paralysis, especially of the lungs, producing intense congestion. This sometimes proved fatal and had been noticed by Graves. There had been a real change in the disease within record, so much so that old physicians who had seen the epidemic of 1847 did not at first recognise the disease in 1889. In descriptions written before 1889 the respiratory symptoms were made most prominent, then the nervous, the gastro-intestinal coming last. In 1889 the nervous symptoms were most striking, then the respiratory, and lastly the gastro-intestinal. In 1892 and since the gastro intestinal had equalled, if not surpassed, the respiratory symptoms in importance, the nervous symptoms still remaining in the first rank. He thought this change was accounted for by modifications which had taken place in our mode of life since 1847. Between 1847 and 1889 the strain upon the nervous system had been very much increased by the introduction of railways, telegraphs, &c. He believed, too, that of late years the feeding of our population had much deteriorated. Instead of plain food, well cooked, eaten leisurely and regularly at home, many people now took food hurriedly and irregularly in restaurants. Hence, a greater strain had been put upon the digestion, accounting, he thought, for the increased prominence of gastro-intestinal symptoms (and in parenthesis of the increase in appendicitis).

Dr. J. FORD ANDERSON said: I only wish to refer to

one of Professor Allbutt's remarks, and that is as to the special infectiousness of the catarrhal form of influenza. That is not quite my experience. I am quite willing to admit that the catarrhal form of influenza is the most infectious but I cannot doubt the evidence with regard to the infectiousness of the other forms too, at least in every case where there is a rise of the temperature, and I think that is the best guide. Where there is an elevation of the temperature the disease inevitably goes through the house. I have seen this both in the gastro-intestinal and in the nervous forms. I have had reason to think that treatment by sprays is a preventive. I have used resorcin for spraying and quinine for gargling, and certainly the members of a family in which these have been used seemed to escape better than those in which they were not employed. I have also found good results from the use of quinine, giving three grains three times a day, or as much as the patient could stand. In that case the patient has been apparently immune from the disease. With regard to treatment—because I am taking the practical side—I should like to say that although I use the salicylate of sodium I distrust it. It is so depressing and upsetting to the digestive organs and I generally prefer salicin as introduced by Maclagan in 20 grain doses, with the addition of phenacetin to reduce fever and to calm the nervous symptoms. But the sooner we get away from those antipyretics to quinine the better. Quinine, however, does not seem to me to suit cases of broncho-pneumonia at all. There I always go to digitalis, chloride of ammonium, and nux vomica, which, I think, are invaluable in broncho-pneumonia. I think the digitalis is a most important element. It increases the tonic contraction of the ventricle and that is all right but sometimes the arterioles are contracted and unless they are dilated by some means there will be trouble and there will be an increase of the broncho-pneumonia. For that I think the addition of the nitrite of sodium or trinitrine is effective in removing the patches of broncho-pneumonia. I should like here to express the great benefit I have received from the use of Hill and Barnard's sphygmometer. To sum up, I think it is a question in treating influenza of treating the symptoms, keeping always in mind the age of the patient, the amount of fever, and any idiosyncrasy of the patient. There is no panacea for the disease either in diet or in medicine.

Mr. F. ROWLAND HUMPHREYS followed and spoke with special reference to the cardiac complications of the disease.

Mr. JOHN ADAMS, arguing from his own experience and from many similar cases, considered that though influenza showed marked attenuation in the majority of cases, yet others occurred which exhibited no diminution in severity of the symptoms.

Dr. ST. CLAIR B. SHADWELL said: There was one point mentioned by Professor Allbutt on the last occasion with regard to angina pectoris which I should like to mention. He said he thought that it was not the heart but the aorta that was affected. But I think after all the cases of angina pectoris that we find in influenza, even in very severe cases, are essentially nervous and of neurotic origin. One case that I saw was very marked. A patient who had had an attack of influenza for three days called me in to see her. She had attacks which were remarkably like those of angina pectoris. I treated her with nitrite of amyl which gave some relief. But on the third morning I was sent for and she was then very bad indeed; she sat up in bed, she gasped for breath, she became livid, her hands and feet were cold, and I thought it was a genuine case of angina pectoris. I examined her very carefully and while examining her chest I happened to press my finger on one of the intercostal spaces; she flinched. I was quite acquainted with the cases of intercostal neuralgia which we meet with in influenza. Consequently I left the chest and went to the back and ran my finger down the spine; the patient called out with pain. Then I knew exactly what was wrong: it was a case of spinal influenza if I may so term it—that is, a case of influenza in which the posterior root of a spinal nerve is affected. I have known such cases for many years now. What I did was this. I took a blister and put it on the tender spot and the patient never had another attack of angina pectoris; she was perfectly cured. That was some years ago. I have attended her for some slight ailments since but she has never shown any symptoms of heart trouble. In many cases of neuralgia coming on after influenza, if you examine the spine you will find an acutely tender spot and if that tender spot be treated with a blister the pain is relieved in 24 hours or less and in two or three days the neuralgia or the neuritis is practically cured, beyond a little tenderness of the nerve. I think cases of angina pectoris which are met with in influenza are essentially neuroses and are not due to any cardiac conditions.

The PRESIDENT concluded the discussion by a few remarks upon points raised therein. He expressed his opinion that in the treatment of influenza the wishes of the patient should be specially considered and finally offered the thanks of the society to all those who had attended to take part in the discussion.

EPIDEMIOLOGICAL SOCIETY.—A meeting of this society was held on April 29th, Dr. B. A. Whitelegge, the President, being in the chair.—Dr. G. S. Buchanan read a paper on the Spread of Small-pox around Small-pox Hospitals in Relation to Aerial Convection. So long ago as 1886 Mr. W. H. Power published his report to the Local Government Board on the Incidence of Small-pox in London from 1876 to 1885 and in 1884 the subject of hospital influence was brought before the society by Dr. J. C. McVail, but in the six years following the question fell into neglect owing to the absence of epidemics. During the last four years, however, the recurrence of outbreaks had necessitated the establishment of hospitals and revived the interest in their influence. Mr. Power had shown in respect of Fulham Hospital that there was a regular graduation in the incidence of the disease around the hospital, the cases being most numerous among equal populations or numbers of houses within the quarter-mile radius and fewer in each successive zone of half, three-quarters, and one mile. In 1884, notwithstanding new and stricter precautions, the experience of 1881 was repeated and the acute cases had since been sent to the ships in the Long Reach and the milder cases and convalescents to Gore Farm, Darenth. In the next epidemic of 1901–02 the same course was followed, so that the cases on the ships averaged 164 and reached a maximum of 275, and while the average incidence in London was 2 per 1000 (the highest, that in Holborn, being 7·2), it was 16 in Grays and 18·5 in the 12 parishes of the Orsett union, Purfleet suffering most severely, yet Dr. J. C. Thresh, Dr. Buchanan, and Mr. R. Corbet could not discover intercourse with the ships or neglect of revaccination, of disinfection, or of isolation. A number of unvaccinated infants succumbed early but there was not the wholesale loss of life that at Gloucester resulted from persistent neglect. The sanitary staff worked well and there was no concealment of cases. Even "contacts" played no important part, no case occurring among them in four fifths of the houses attacked. Yet throughout the epidemics Purfleet, Grays, and West Thurrock suffered far beyond the remainder of the district. On the Kentish shore a large number of workmen were employed in erecting a temporary hospital on the uninhabited flats. During the three months Dec. 1st, 1901, to Feb. 27th, 1902, before any patients had been received, cases of small-pox appeared among them from time to time, 60 in all, though, of course, personal communication between these men and the members of the staff could not be excluded. This, however, could not account for the appearance of cases on board vessels that had anchored in the Long Reach when 12 days later they were at Rochester, Faversham, or other ports. In studying Dr. A. K. Chalmers's report of small-pox at Glasgow in 1890–97 the reader was struck by the disproportionate incidence on the eastern district where was the Belvidere, the only hospital. In whichever division the disease broke out the hospital had no sooner begun to fill than the number, both absolute and relative, of cases in the eastern division rose until they in three of the six years exceeded, and in three closely approached, the highest in the other wards. He admitted that from the reports of the 600 cases of small-pox at Manchester from 1902 to 1904 he could draw no conclusions, for the population of 48,000 living within a mile of the hospital contributed no more than 25 cases and none of the men employed in laying drains around the hospital were attacked though they refused to be vaccinated. Dr. R. J. Reece's report on the epidemic at Liverpool in 1902–03 was the most important contribution to the question that had appeared of late. With a population of 720,000 there were in the two years 1902 and 1903, not counting those brought by shipping, 2278 cases in 1632 houses. There were two old hospitals, Priory-road and Park-hill, and one new one, which alone had been approved and aided by the Local Government Board, at

Fazakerly outside the city boundary. For 53 weeks Priory-road was the only hospital, when that at Fazakerly was added and remained so to the end, Priory-road being closed after 77 weeks' occupation, while the Park-hill hospital opened during the height of the epidemic was used for 24 weeks only. Park-hill was opened on Jan. 12th to meet a local outbreak due to an unnotified and fatal case. The houses newly invaded within a mile of this hospital rose from two to four in each successive fortnight to from 20 to 50 and the district continued to suffer more than the rest of Liverpool until the hospital was closed. The graduated incidence shown by the percentage of houses attacked in each zone around was well marked, as it was also in those around the small hospital at Priory-road. In what did this "hospital influence" consist? He denied that the traffic of ambulances and vehicles, the visits of friends or tradespeople, or the movements of the staff sufficed, whatever influence was allowed them, to explain the graduated incidence. Save at Dewsbury and a very few places of less importance no general violation of the rules or breaches of regulations for seclusion of patients had been established and the patients, staff, and tradesmen were not drawn from the immediate neighbourhood more than from more or less distant quarters, while ambulance traffic would follow the lines of the main roads, not the smaller streets and alleys. Felling was invaded from the side of Gateshead hospital which stood in a high open position, its own hospital being two miles on the other side of the town. The negative character of the evidence from Manchester was explicable by the measures adopted by Dr. Niven to prevent the diffusion of the epidermis. Then the diffusion of dust, chemical and other, from factory chimneys and of acid sprays which carried by air-currents were seen to fall on certain areas leaving others, of pollen grains, volcanic ashes, and experimentally the spores of moulds and bacteria, all showed the reasonableness of the hypothesis which sufficed to explain nearly every instance of the spread of the disease from a hospital whether other hypotheses did so or not.—Dr. C. B. Ker admitted that Dr. Buchanan's paper was the best defence he had heard of the aerial theory and would have convinced him if he had not known that all evidence on the other side had been suppressed. The supporters of human agencies did not demand that infection should be always, if ever, conveyed by winds but they did demand some evidence of such convection when all the conditions were favourable. The sole isolation hospital in Edinburgh was badly placed and ill-arranged in every way, only 72 yards distant from the fever block with 400 patients, 325 yards from the poorhouse with 1000 inmates, nearer to a hydropathic establishment for 200 patients, while paupers worked all day close to its boundaries. The average number of patients in the small-pox hospital had been 55 for two months and 47 for three months. Within the quarter-mile circle were Craig House Asylum with 400 patients and a general population of 2000, but the only cases within a mile of the hospital were two imported and two secondary in the poorhouse, and by a curious coincidence exactly the same occurred in another poorhouse far away. The fever patients were mostly vaccinated but a large number of typhoid fever patients and of cases of erysipelas in the ward nearest to the small-pox block were not, yet not one contracted the disease. The nurses for the small-pox wards were volunteers from the fever hospital and only the most trustworthy were accepted. Once in they were never allowed to leave the building on any pretext, while Dr. Ker, the medical officer of health, the Local Government Board inspector, and the ambulance attendants were the only persons who were admitted. Here was the secret of their success. He considered the association of fever and small-pox hospitals to present many advantages; the old nurses were more to be trusted than new recruits and the proximity of the hospitals enabled him to exercise more control. Just outside the mile limit several houses were invaded but in three of the first four exposure to infection was proved. The actual epidemic was concentrated around the site of the old hospital which in previous epidemics used to be blamed as a centre for diffusion of disease in the district.—In view of the lateness of the hour and the importance of the subject further discussion of the paper was at the instance of the President adjourned to the following Friday.

WINDSOR AND DISTRICT MEDICAL SOCIETY.—A meeting of this society was held on April 26th, Mr. W. B. Holderness, the President, being in the chair.—Dr. W. F. Lloyd showed a child, aged ten years, suffering from symptoms pointing to Syringomyelia.—Dr. R. H. Cole read a paper on the Clinical Aspects of General Paralysis. He based his remarks on the experience gained from the treatment of 19 consecutive cases in private patients, of which careful records had been made. He dilated on the variability of the premonitory symptoms and the difficulty of early diagnosis, also the necessity of placing most cases as speedily as possible under supervision and control. The age incidence in the cases narrated averaged 44 years, the disease affecting twice as many married as single persons. The disease lasted from a few months to a period as long as seven years, although most cases proved fatal in two and a half years. He pointed out the rarity of the disease in female private patients, only two being included in the number. The different types of the disease were fully described and special reference was made to the tabetic forms. The ocular signs and the cerebral seizures in the various cases were also detailed. The etiological factors were next discussed and it was stated that the element of syphilis was sufficiently proved in 65 per cent. of the cases. Some lantern slides kindly lent by Dr. F. W. Mott illustrating various points in the pathology of the disease were exhibited.—Mr. W. J. Handfield Haslett thought that the question as to the causation of general paralysis by syphilis was not so definitely settled as they would gather from Dr. Cole's remarks. It was, he said, at least strange that a disease like syphilis should at one time bring about a definite train of symptoms compatible with considerable longevity and at another a fatal disease like general paralysis. With reference to the fact alluded to by Dr. Cole, that such a large proportion of sufferers were married men, Mr. Haslett offered the explanation that the early mental symptoms of general paralysis were all of a nature directly calculated to predispose to matrimony and, in fact, he was of opinion that many general paralytics married in the early stage of the disease. And, finally, since it was in the early stage of general paralysis that so much social misery and unhappiness were brought about, Mr. Haslett asked Dr. Cole whether he would give an account of what he considered the earliest signs of the disease. He himself was inclined to attach great importance to the eye symptoms, particularly to the loss of the ciliary reflex.—Dr. Cole having briefly replied the proceedings terminated with a vote of thanks to Dr. Cole for his interesting contribution.

OTOLOGICAL SOCIETY OF THE UNITED KINGDOM.—An ordinary meeting of this society was held on May 1st, Dr. Thomas Barr, the President, being in the chair. A discussion upon Vertigo was opened by Sir Victor Horsley and Dr. J. S. Risien Russell. Sir Victor Horsley confined himself to cases of vertigo arising from destructive ear disease or new growth and discussed minutely the symptoms which enabled the lesion to be localised. In disease of the semicircular canals he compared the sudden onset to that of an epileptic fit or an attack of trigeminal neuralgia and pointed out that this was due to a summation of stimuli. When the lesion was in the neighbourhood of the medulla it was almost impossible to distinguish the site of the growth. As regarded symptoms, they had to consider both *rotation* and *titubation*, the latter occurring when the lesion was anywhere between the medulla and the cerebral cortex. The results of observations occurring when rabbit shooting were valuable in localising lesions of the pons and crus. The experiments of Mills of Philadelphia showed that the centre for orientation was situated in the temporal lobe of the cerebrum and patients with growths in this region showed titubation cured by removal of the neoplasm. Sir Victor Horsley's address was illustrated by lantern views.—Dr. Risien Russell discussed vertigo as a symptom in affections of the ear, in organic intracranial disease, in disseminated sclerosis and tabes, in epilepsy, neurasthenia, and hysteria. He pointed out the difficulties in diagnosis, the most trustworthy data upon which a correct diagnosis could be established, and the influence of diagnosis on prognosis and treatment.—Dr. J. Dundas Grant, Dr. H. Tilley, Dr. Urban Pritchard, Mr. R. Lake, Mr. E. B. Waggett, Mr. Hunter F. Tod, Mr. G. W. Hill, Mr. Hugh E. Jones, and the President took part in the discussion which followed.

MEDICAL DEFENCE UNION.—The annual general meeting of the Medical Defence Union, Limited, will be held at the Medical Society's rooms, 11, Chandos-street, W., on Thursday, May 25th, at 5 P.M., to receive the annual report for 1904, and to discharge other business.

Reviews and Notices of Books.

Health at School, considered in the Mental, Moral, and Physical Aspects. By CLEMENT DUKES, M.D., B.S. Lond., F.R.C.P. Lond., Physician to Rugby School, &c. Fourth edition, revised, enlarged, and illustrated. London: Rivingtons. 1905. Pp. 606. Price 10*s.* 6*d.* net.

THOSE who are already acquainted with previous editions of Dr. Dukes's book, the last of which appeared in 1894, will welcome the publication of a new edition. For the sake of those who are not so acquainted with it we may point out that it is not a mere dry treatise upon drains and ventilation, upon infection and isolation, upon wearing flannel next the skin, and eating porridge for breakfast. All of these matters are indeed contained within this volume but there is much more besides. Dr. Dukes considers from the point of view of health practically every side of a boy's life at school—*rotum, timor, ira, voluptas, gaudia, discursus*—and is thus enabled to produce a book which affords most interesting reading to all who are concerned in the happiness and the well-being of boys and girls. Even such a matter as the value of compulsory Greek comes within the writer's purview. And here we cannot help recalling a "tag" of equally compulsory Latin, containing the advice *ne sutor ultra crepidam;* for on a purely educational subject such as this Dr. Dukes speaks with no more authority than any other intelligent observer, and a tendency to stray into such by-paths rather detracts from, than adds to, the authority with which he deals with matters upon which his words have real weight. However, with the gist of his opinions even on this thorny subject we can heartily concur, amounting as they do to the doctrine that mentally as well as physically boys and girls vary and that what is mental food for one may be indigestible when supplied to another. We hope that educational authorities may in the future hit upon a plan which will enable masters first to ascertain their pupils' bent and then to arrange their studies accordingly. After the acquirement of the three R's we would not have either compulsory classics or compulsory science for all alike, though there is a certain modicum of general information which must be possessed by all who aspire to escape the charge of illiteracy.

With regard to the choice of a school Dr. Dukes points out that probably the healthy boy coming of a sturdy stock will flourish in any locality, given conditions of ordinary sanitation, but that the delicate boy must have his school carefully chosen for him on the grounds of health as well as of social and educational advantages. He also rightly remarks that many schools at the present day charge first-class fares for third-class accommodation, especially as regards the sleeping and living rooms for the boys. This is a matter into which parents must inquire and insist upon getting proper value for their money. But we fear that at present they have very inadequate notions as to what constitutes proper conditions for school life. We hope that Dr. Dukes's book will be so widely read as to spread abroad more enlightened ideas. Indeed, it is not only at school that the best sanitary conditions are to be provided for growing boys and girls but also at home. The holidays should be, it is true, periods of rest and home influence but they should not be devoted to indulgence in such unhealthy amusements and pursuits that the children go back to school in anything but a satisfactory state of health. Studies, too, must be regulated with due attention to the physical condition of pupils. It is well to remember that the period of most rapid growth does not coincide in boys and girls, being greatest in boys about the sixteenth year and in girls at an earlier age—namely, from 12 to 14. Dr. Dukes quotes some interesting tables showing these variations.

With regard to the arrangements for sleeping accommodation at school, Dr. Dukes is much in favour of large dormitories as opposed to cubicles or separate rooms. We cannot help thinking that it is impossible to lay down any general rule in the matter which shall be applicable to all schools. Much must depend upon the age of the boys concerned and especially upon the relative admixture of different ages. The same criticism may also be applied to the advice that the boys should have little or no leisure time entirely to themselves but should be expected to join in organised games whenever they are out of school. Surely it is better for elder boys to have opportunities of gradually accustoming themselves to find occupation for their leisure moments while they are at school than that they should after a time of exaggerated tutelage suddenly find themselves at a university or in business where no supervision is exercised over their spare time. Dr. Dukes's advice is no doubt excellent for schools containing small boys and probably for the junior classes at a public school. We seem, however, to have a recollection of a certain public school at which some such supervision as he suggests was carried out during every minute of the boys' time and we do not think that the results achieved were in any respect better than those of other institutions which pursued what we have always regarded as the more English plan. It is well for boys to feel that they are trusted; they will then grow up trustworthy.

The last point upon which we will quote Dr. Dukes's wise advice is that of punishment at school. He rightly urges that expulsion should be reserved as a last resort in the case of boys who prove themselves incorrigible by other methods; a boy who loses his character at school should have the opportunity of redeeming it there. On the other hand, corporal punishment of suitable kind in suitable cases is needful and salutary. But the method adopted must be suitable. It is becoming recognised that "boxing" the ears is cruel and dangerous and Dr. Dukes insists on the further danger of shaking. Against the birch there is nothing to be said if applied with discretion and to the proper region.

In conclusion, we can only express the hope that the new edition of this book will be carefully studied by the greatest possible number of both parents and schoolmasters and that they may unite to put into practice the many excellent pieces of advice which it offers for their guidance.

Transactions of the American Ophthalmological Society. Fortieth Annual Meeting, held at Atlantic City, N.J., 1904. Vol. X., Part II. Hartford: Published by the Society.

THIS number of the Transactions contains reports of 28 papers read before the society, of which the chief are: 1. Operations upon the Eyeball in the presence of an Infected Conjunctival Sac, by Dr. C. S. Bull. It is shown in this communication that a conjunctival sac free from noxious bacteria of all kinds does not exist. Quoting from Rymowicz, who examined 100 healthy eyes, it appears that in 94 cases the bacillus pseudo-diphtheriticus was present; in nine the pneumococcus, in five a streptococcus, in six the Morax-Axenfeld bacillus, in six the staphylococcus aureus, and in eight cases the staphylococcus albus. Dr. Bull strongly urges the importance of thoroughly freeing the conjunctival sac as well as the margins of the lids from the various germs always present by careful irrigation with some indifferent fluid, such as normal saline solution, and to avoid operating as far as possible until the sac and the lids are clean. He is of opinion that if there be suppurative disease of any part of the lacrymal passages all operations on the eyeball are positively contra-indicated. The lacrymal sac must be excised by the

galvano-cautery and the lacrymal puncta obliterated. 2. Dr. G. E. de Schweinitz contributes two papers, one on Certain Non-traumatic Perforations of the Macula Lutea, and a second on Conjunctivitis Nodosa. Each article is accompanied by a coloured plate and the latter one by two plates in addition, representing the pathological conditions present. Dr. W. C. Posey describes cases of Tuberculous Growths on the Iris and in the Choroid and gives drawings showing the pathological appearances under the microscope, and Dr. Thomas R. Pooley also gives a case of Conglomerate Tubercule of the Choroid. Dr. W. A. Holden describes a case of Mind Blindness, unique in that the entire mesial surface of both occipital lobes and both optic radiations were preserved. Dr. A. Duane gives the results of his experience on Prism Exercises. Besides the above the Transactions of the fortieth meeting contain several interesting papers, as those of Dr. George Gould on Dextrocularity and Sinistrocularity; of Dr. Lucien Howe on the Muscle of Horner and on the Act of Winking and its Photographic Measurements; and of Dr. Robert Sattler on Sympathetic Neuro-retinitis and on Angelucci's Modification of Cataract Operation. There are also several accounts of particular cases, such as that of Dr. F. H. Verhoeff on a rare tumour arising from the pars ciliaris retinæ, which he terms a terato-neuroma; of Dr. Clarence Veasey on a case of Bitemporal Hemianopsia; and of Dr. C. W. Cutler on Symmetrical Enlargement of Parotid and Lacrymal Glands. There is a report of the committee on Standard Test-types which is of value, and Dr. William and Dr. Archibald G. Thomson record improvements in the refractometer which they have devised.

Le Béri-béri: Définition, Etymologie, Historique, Bactériologie, Symptomatologie, Pathogénie, Pathologie Expérimentale, Traitement. Par le Dr. H. VIVIAN DANGERFIELD. Paris: A. Maloine. Pp. ccxlii.-211. Price 12 francs.

THIS comprehensive work on beri-beri has been written with the purpose of dispelling the various confusing ideas on the subject which are at present extant. The several opinions as to the nature of the disease have been grouped and classified in order of seniority, the theories of the pathogeny have been reduced to order, and an attempt has been made to elucidate the two capital points of the malady—viz., its genesis and its essential nature. The results of the personal researches extending over seven years without interruption are detailed and an attempt is made to assign it to its true place amongst the various tropical diseases.

Beri-beri is depicted by the author as a tropical, infectious, contagious, and epidemic disease, characterised occasionally by the presence in the blood of pathogenic germs belonging to the family of cocci—viz., the micrococcus of beri-beri. Clinically the malady appears under three forms, the œdematous, the paralytic or dry, and the mixed. The first two are not distinct maladies but are merely stages of the same morbid process, whilst the mixed form demonstrates this fact. The post-mortem appearances likewise testify to this fact. The author maintains that the view commonly held as to the endemic character of the disease is not correct; its characteristic is really epidemic. The views of various authors concerning its essentials are next narrated, from those of Corre down to the most recent opinions of Hamilton, Wright, and Durham. A good *résumé* of the history of the disease from the seventeenth century to the present day follows, succeeded by an account of its geographical distribution, from which it appears that it flourishes between the 35 degrees of north and south latitude.

In describing the etiology of the affection the author considers the causes under the two heads of those in relation to the sufferers and those in relation to the malady itself. As regards the former he states that age plays no predisposing part: he has found beri-beri at all ages from the youngest to the oldest. As regards sex the evidence of certain authors points to the female being the most affected, of others to the males, but all are struck with the gravity of the disease amongst pregnant women, especially as regards the nervous and cardiac lesions and the œdema of the external genital organs—indeed, the latter may present an obstacle to delivery; one case is mentioned by the author where the orifice of the vagina was reduced to the size of a two-franc piece. There is no predisposition shown by any particular profession or class of society, although some writers state that those who follow sedentary occupations are more liable to attack. Poverty or the reverse merely acts by means of the more capable resistance to the disease offered by the well-to-do. All debilitating causes predispose to the affection. Heredity plays no part. As regards race this malady has been observed in all nations living in the inter-tropical zone. Next with reference to alimentation, many observers have been struck by the persistence of digestive disturbances in beri-beri and so have concluded that the disease had an origin of an alimentary nature: others to-day hold that the latter has a more subordinate influence and plays but a secondary rôle. Thus Manson cites an epidemic in a prison at Singapore, in which the males were decimated and the females were spared, although both had the same food and water. Temperament has no influence, nor has the soil, the air, or the water. Finally, as regards climate, very cold or very hot ones are not favourable for the appearance of the disease. In climates with cold and hot months beri-beri generally breaks out epidemically in the latter, and where there are two seasons, a dry and a rainy one, and in addition where it is hot all the year round, the disease chiefly affects the rainy season.

With regard to the etiology in relation to the malady itself the capital determining factor is infection. The causes favouring the multiplication of the germs, and thus the expansion of the disease, are the following. Heat plays an important rôle; light, electricity, and magnetism also add their influence. Cold acts most powerfully in producing profound modification of the disease which cannot exist in cold climates. A temperature of 0° C. for a few hours can destroy all vitality in the germs. For the latter to develop heat, moisture, and a feeble electrical tension are absolutely necessary, these factors being here enumerated in the order of their importance. The fact of epidemics occurring on board ships after they have left port for some time is explicable by the artificial production of a suitable environment from the fouling of the air in the cabins and the holds of the vessel and the raised temperature in the latter. It is to be noted also that a continued repetition of infection is necessary for the establishment of an epidemic of beri-beri. Another noticeable fact is the readiness to contract the disease shown by wounded men or those suffering from tropical ulcers when they are associated with patients affected with beri-beri. Lastly, the aggregation of human beings creates a medium especially favourable to an outbreak.

Dr. Dangerfield next deals with the bacteriology of the disease. A short history of the various micro-organisms which have been held to have a causative relation to the disease is first given, commencing from the work of Rogers, Ogata, Lucenda, Cornelissen, and Sugenoya. In 1898 Professor Nepven described a strepto-bacillus. Pekelharing, d'Atchni, and Winkler next narrated the presence of cocci which when inoculated into animals reproduced the symptoms of the disease. Dr. Dangerfield in 1899 discovered certain spherical organisms which were a little larger than pus cocci. Their cultures, however, were sterile. He next introduced certain modifications in the bacteriological technique appropriate for examination in warm climates and used for his researches a modified Jensen medium. The micrococcus beribericus discovered by him has certain morphological characteristics which, however, vary according to its stage of

evolution. Five such stages are enumerated; thus there is a hemispherical, a diplococcic, a micrococcic, a zooglœic, and finally, the stage of sporulation. The cocci show one peculiarity—viz., that in the centre of the preparation they preserve their individuality, whilst at the periphery they come together with a highly coloured conglomeration, forming a sort of barrier to the entrance of the colouring agent. The characters of the micrococcus and the colouring agents best adapted to display it are fully described, the author preferring one of gentian violet, methyl blue, dahlia violet, kristal violet, methyl green, and alcohol. Next follows a description of the characters of the culture. The bacterium is essentially aerobic; its chemical and physical reactions are narrated. This section on the bacteriology of the disease is very complete; the author concludes that the organism which he has described has its own special and peculiar characteristics and it is highly probable that it possesses either a specific pathogenic effect or an actively associating rôle.

The symptomatology of the disease is next dealt with under the heads of the Period of Incubation, the Period of Invasion, and the Period of Recovery or Death. During the first there are a loss of sensation and feebleness of the lower extremities, with an epigastric uneasiness and various symptoms of dyspepsia. The period of invasion is characterised by digestive, nervous, muscular, trophic, circulatory, respiratory, and urinary troubles. During the period of reparation the symptoms gradually abate. Death may be sudden or may occur slowly. If sudden it will be from embolism or syncope, if slowly from asphyxia. An excellent chapter on the diagnosis of the affection is given and then the means whereby prophylaxis may have a good result are narrated. The immediate methods consist in the vigorous application of the measures advocated by the Conference of Venice. The more remote methods are the cleaning of the dwellings and localities which have been contaminated, burning of the bodies of those who have died from beri-beri, and the undertaking of thorough sanitation in the effected localities.

The remaining part of the work is occupied with the post-mortem results; the prognosis, duration, and course of the affection; the statistics of its mortality; and the treatment. With regard to the last it is acknowledged that at present we have no specific but the author thinks that the secret of success in this direction is likely to lie in a method of serum therapy that is as yet to be discovered. An account of the experimental pathology undertaken by Dr. Dangerfield and a valuable series of personal observations from 1897 to 1904 complete the volume, which is without doubt the most comprehensive work on this serious disease that has yet been published.

A Treatise on Bright's Disease and Diabetes. By JAMES TYSON, M.D., Professor of Medicine in the University of Pennsylvania; one of the Physicians to the Pennsylvania Hospital. Second edition, illustrated. Including a section on the Ocular Changes in Bright's Disease and in Diabetes, by GEORGE E. DE SCHWEINITZ, M.D., Professor of Ophthalmology in the University of Pennsylvania; Ophthalmic Surgeon in the Philadelphia Hospital. London: Rebman, Limited. 1904. Pp. 381. Price 17*s.* 6*d.*

THE first edition of this work was published in 1881 and having been out of print for many years it has been in a large measure rewritten and much enlarged. The earlier sections of the book deal with the anatomy of the kidney and with albuminuria. The remarks on the source of albuminuria and the mechanism of its production are brief and incomplete, the vexed question of "physiological" albuminuria being scarcely touched upon. A good account, however, is given of the various forms of casts which may be met with in the urine, together with a consideration of their nature and clinical significance. A section has been added on Acute Interstitial Nephritis, which is defined as "an acute inflammation of the kidney characterised by a non-purulent cellular exudate associated with degeneration of the epithelium but not dependent upon it." The undoubted existence of this form of nephritis as a pathological entity has only been recognised within comparatively recent years, although the first case was described by Biermer as far back as 1860. Dr. Tyson gives an interesting account of the pathology of the affection. The interstitial cellular infiltration may be general throughout the kidney or focal, though even when the former prevails the disposition to focal arrangement is still marked, but no satisfactory explanation for this character has been found. No distinctive symptoms have been observed in this form of nephritis but it occurs more especially in connexion with scarlet fever and diphtheria.

The section on the Dietetic Treatment of Bright's Disease gives a good summary of modern ideas as to the diet to be administered to patients who are the subjects of this affection. Dr. Tyson's views closely correspond with those of Professor von Noorden. The indications both in acute and chronic nephritis are to spare the kidney as far as possible and to prevent the accumulation of toxic substances in the blood. A purely milk diet (with the addition of cream) is suited to the acute form but is not so desirable for prolonged use. Attention is rightly drawn to the erroneous and ill-founded notions which have arisen in some minds with regard to meat food, especially as to the difference between white and red meats; it has been demonstrated that the quantity of proteid in raw white meat is little less than in raw red meat. Contrary to the opinion formerly held that no flesh food should be given in nephritis, many authorities now hold that some meat is necessary in cases of contracted kidney in order to maintain a high degree of bodily vigour. Dr. Tyson insists upon the fallacy of the older doctrine and advises patients with chronic nephritis merely to limit their consumption of all meats rather than of any one kind. He also doubts the efficacy of recommending copious quantities of water in chronic renal disease, although this plan is generally adopted and with apparent success.

Turning to the portion of the volume dealing with diabetes, we find an excellent *résumé* of the present knowledge concerning the pathology of this disease. The various theories elaborated by different observers are duly considered and out of a somewhat chaotic collection of facts Dr. Tyson arrives at certain conclusions which he expresses very clearly as follows:—It appears possible to make three categories of all cases of glycosuria: First, cases of alimentary glycosuria whereof diminished carbohydrate ingestion is the treatment. Secondly, cases of nervous lesion or diseases in which directly or indirectly through the nervous system the inhibitory centre in the medulla oblongata is deranged and an active hyperæmia of the liver and consequent glycosuria result. These cases recover if the nervous lesion is curable. Thirdly, cases in which there is no lesion or disease of the nervous system but in which the symptoms of diabetes are very pronounced. These for convenience Dr. Tyson denominates "essential diabetes." In a certain proportion of these the pancreas is diseased; in others no change in this organ is discoverable. In the present state of divided opinion as to the pathology of diabetes, the above is a good classification upon which to found clinical procedures, but further investigations are certainly desirable in order to attempt to solve a very difficult problem. The directions for the treatment of diabetes are given in a clear and complete manner; the dietetic and hygienic requirements are fully discussed as is also the treatment by drugs.

Taking the work as a whole, we can recommend it as being carefully and accurately written. It contains numerous practical suggestions as to the treatment of Bright's disease

and diabetes and also gives a good idea as to the most favourably received theories in regard to etiology and pathology.

LIBRARY TABLE.

A Nurse's Handbook of Obstetrics. By JOSEPH BROWN COOKE, M.D. Philadelphia and London: J. B. Lippincott and Co. 1904. Pp. 391. Price 9s. net.—This book is primarily intended for the pupils in the New York City Training School for Nurses, with which the author is associated. The work is a good example of its kind and contains just that amount of information which it is necessary for every maternity nurse to know. Some of the author's teaching we are inclined to disagree with but on the whole the book forms a very fair and trustworthy guide for an intelligent nurse. We notice that a correct description of the advantages of the binder is given and Dr. Cooke does not repeat the old fallacy that the binder has any real effect in preserving the patient's figure. The instructions given with regard to the changing of the vulvar pads are good, but we are surprised to find that the position on the back is recommended as the best for passing the catheter. In our experience the lateral position is in every way preferable and enables the catheter to be passed much more easily and readily, especially when the parts are swollen after labour. We are aware that nurses are usually taught to pass this instrument when the patient is lying on her back but a trial of the lateral position will very soon convince anyone that this is the easier and better method. The statement on p. 20 that when eclampsia originates after labour it is of a far more serious character than when it occurs either before or during labour is hardly warranted by the facts. On p. 205 the method of packing the uterus with gauze for post-partum hæmorrhage is given undue prominence. It is a procedure which is practically never necessary if the hot douche is used properly. In Chapter XIX. on the Management of the Puerperium the nurse is instructed to hold the fundus uteri through the abdominal wall for one full hour after the birth of the child, but nowhere in this chapter do we find any mention at all of the expression of the placenta and there is nothing to tell us that the author is assuming that he placenta has already been expressed. If it has not been expressed then the directions as to the arrest of hæmorrhage are misleading and if it has been then there is no necessity to hold the uterus for one whole hour after this has occurred. We are glad to see that the old-fashioned method of hardening the nipples with brandy or some similar lotion is not recommended but the very sound advice is given to soften them before labour with lanoline or some similar substance to prepare them for suckling. The illustrations are atisfactory. There is a very useful glossary and the book is one which we can recommend as suitable to nurses.

Ward, Lock, and Co.'s Illustrated Guide Books. London, 1905. Twenty-sixth edition. Pp. 336. Price 1s.—That a book has reached its twenty-sixth edition shows pretty well that it answers the purpose for which it was written, and the guide now before us will certainly be found very useful by hose for whom it is mainly written—namely, the countryman and the foreigner. We notice one curious omission n the section entitled "The Railways of London." The metropolitan termini of the various companies are given, Cannon-street being alluded to, but there is no mention of Charing Cross, except incidentally under the heading of Charing Cross Station on the "Underground" which is described as being "close to South Eastern and Chatham terminus of same name."

Medical Philology. Gathered by L. M. GRIFFITHS, M.R.C.S. Eng. Part I., A—EI. Bristol: J. W. Arrowsmith. 1905. Pp. 100. Price 2s. 6d.—The matter contained in this book is an enlarged edition of papers which appeared in the *Bristol Medico-Chirurgical Journal* in a department of the journal established under the editorship of the late Mr. Greig Smith. The words dealt with are mostly taken from the "Promptorium Parvulorum" and from the "Catholicon Anglicum," two fifteenth-century English-Latin word-books. Mr. Griffiths has got together a vast amount of interesting information. For instance, many readers of Anstey's delightful "New Bath Guide" must have been puzzled by the following passage in Letter XI. :—

> "See little Bob Jerom, old Chrysostom's son,
> With a chitterlin shirt, and a buckle of stone."

Chitterlings, of course, are "the inwards or hogs' guts dressed for food which are much shrivelled or curled up, from whence the cambric ornaments worn upon the shirts of most men at this (1750) time are so called, because of their being gathered in folds or plaits" (Dyche and Pardou's Dictionary). We look forward with interest to the remaining parts of Mr. Griffiths's book.

How to Keep "Fit," or the Sailor's Guide to Health in all Parts of the World. By Fleet-Surgeon W. G. K. BARNES, M.D. R.U.I., R.N. Portsmouth: Gale and Polden. Pp. 37. Price 3d.—This little book has received warm commendation from Lord Charles Beresford and we quite agree with his opinion. The directions are admirable and are expressed in perfectly plain and simple language. Not only men in the Royal navy or in the army but also civilians will profit largely by reading them. We see that Fleet-Surgeon Barnes recommends (p. 28) oil of pennyroyal to keep away mosquitoes. In our experience the oil of mentha pulegium is of little use, whereas we have found the oil from the pennyroyal of the United States (hedeoma pulegioides) decidedly successful.

Obstetrics for Nurses. By JOSEPH B. DE LEE, M.D. Fully illustrated. London, Philadelphia, and New York: W. B. Saunders and Co. 1904. Pp. 460. Price 12s. net.—This book considers two subjects—obstetrics for nurses and obstetric nursing, and the author has combined them so that they may be mutually helpful one to the other. The work is divided into three parts; the first deals with the anatomy and physiology of the reproductive system, the second with nursing during labour and in the puerperium, and the third with the pathology of pregnancy, labour, and the puerperium. We are glad to see that the author recommends during pregnancy the application of cocoa butter or albolene to the nipples instead of the astringent washes or alcohol so commonly employed, for as he points out the nipples should not be hardened but rather kept soft and pliable. The directions for the care of premature infants are particularly good and so is the section on the various methods of artificial feeding. There are an appendix on visiting nursing in obstetric practice and a useful glossary and full index. This is a book which can be recommended to nurses.

A Text-book of Gynecology. Edited by CHARLES A. L. REED, A.M., M.D., Professor of Clinical Gynecology in the Medical Department of the University of Cincinnati. Second edition, revised. London and New York: D. Appleton and Co. 1904. Royal 8vo, pp. 900. Price 21s. net.—This work has passed through successive printings with such rapidity since its first appearance that no very extensive revision has been necessary. In the present edition, however, some changes have been made and some of the paragraphs, more especially those relating to details of treatment and technique, have been rewritten. The book retains its essential characters quite unaltered and we noticed the first edition at length in the issue of THE LANCET of Nov. 2nd, 1901. There is no change in the number of pages and the list of the contributors remains the same. It is a pity that in producing a so-called second edition the editor did not seize the opportunity to carry out a more complete revision. The treatment advocated on page 424 for the

removal of polypi from the interior of the uterus by the employment of the old-fashioned wire écraseur would then no doubt have been amended. We cannot imagine any modern surgeon employing such a useless and antiquated method of dealing with these tumours. Further down the page we are told that in the case of large polypi the cervix should be incised and then dilated with the finger or a steel dilator—a very certain way of tearing the tissues with no corresponding advantages. Surely it is time the old fallacy that hæmorrhage takes place from the pedicle of these tumours after their removal, which cannot be quite controlled either by a gauze plug or a hot douche, should no longer find any place in a so-called modern text-book. A number of minor errors, mainly in the spelling of names and in the references, still remain and detract from the value of the work. The volume is, on the whole, one which presents many features of interest and a good deal of originality in its arrangement, but like all works by a number of authors there are a certain amount of overlapping and a great difference in the merits of the various sections.

The Principles and Practice of Asepsis. By A. S. VALLACK, M.B. and Ch.M. Syd., Surgeon to the Burrima District Hospital, New South Wales. London: Baillière, Tindall, and Cox. 1905. Pp. 95. Price 2*s.* 6*d.* net.—The aim of the author of this small volume has been to describe a practical and efficient system of asepsis. He lays especial stress upon points which are sometimes neglected in works of this kind. The first is the importance of conserving tissue resistance; the second is the advisability of avoiding contamination of the hands with microbes of high virulence; and the third is the extreme difficulty of sterilising organic substances such as catgut. There is an introduction by Dr. W. J. Smyly in which he states his opinion that "this work is a useful addition to the literature of this most important subject." Dr. Smyly writes that he thinks that "the most important facts clearly brought out in this work appear to me to be that it is impossible by any known method to render hands which have been already contaminated with septic matter pure, and that therefore it is necessary to cover them with sterilised rubber gloves." The book is written in a simple and plain manner, it is quite destitute of padding, and in it the busy practitioner will find the views of the most successful operators expressed; by following the rules laid down he will be able to bring his own operation cases to a successful issue. The author regards rubber gloves as the greatest advance in asepsis since the practice of boiling instruments was introduced. At p. 29 it is stated that a solution of perchloride of mercury in glycerine is inert, yet it is, we believe, used largely as a lubricant. At p. 74 there is a very evident error in the wording of the axiom dealing with the great principle of the treatment of wounds. The axiom as printed is controverted by the corollary. This printer's error should not have escaped the reader of the proof. It sounds almost paradoxical to state that in dressing a septic wound aseptic precautions should be observed, yet this is most necessary, lest a fresh variety of microbe may increase the virulence of the infection. The little book will repay those who read it.

The Sanitary Inspector's Handbook. By ALBERT TAYLOR, Member of the Royal Sanitary Institute. Fourth edition, with illustrations. London: H. K. Lewis. Pp. 455. Price 6*s.* net.—This work has been thoroughly revised, illustrations added, and the text and index amplified, but the arrangement of the subjects remains as in the last edition. To the alphabetical synopsis of the law of public health as applicable to England and Wales and to the metropolis contained in the second edition the provisions of the Public Health (Scotland) Act, 1897, have been added in a separate column. The by-laws of the London County Council relating to the construction of drains, water-closets, soil-pipes, and to the depositing of the drain plans have also been inserted. Sanitary inspectors and those seeking to qualify for such appointments will find the book a useful guide upon all questions concerned in their official work. The book supplies practical information and it may safely be consulted by those who take an interest in sanitary subjects. We note a few printer's errors but the general get-up of the book—the print, the paper, and the illustrations—is good.

Essays in Puritanism. By ANDREW MACPHAIL. London: T. Fisher Unwin. 1905. Pp. 257. Price 6*s.*—The essays which make up this book were first read before a company of artists who "had the traditional antipathy of their class towards the spirit of Puritanism." Those who read them are asked to keep this local circumstance in view. The essays are five in number; they treat of the lives and doings of Jonathan Edwards, John Winthrop, Margaret Fuller, Walter Whitman, and John Wesley. The essays are written in an interesting way and contain much that is edifying and instructive; occasionally, though rarely, passages are amusing.

In Loco Parentis: Chapters on Institution Life and Work. By the Rev. MARSHALL GEORGE VINE, B.A., Warden and Resident Chaplain of the Philanthropic Society's Farm School, Redhill, Surrey. With a Preface by JAMES GRANVILLE LEGGE, His Majesty's Chief Inspector of Home Office Schools. London: John Murray. 1905. Pp. 83. Price 2*s.* 6*d.* net.—This book can be commended to the notice of all engaged in the bringing up of children. It is one which will charm and cheer parents and guardians and at the same time strengthen the resolve of all those who are doing their best to bring up boys to be good men and good citizens of the empire. The idea of writing these chapters was derived from reading Mr. A. C. Benson's lately published book "The Schoolmaster." It occurred to the author that he might be able to encourage and to strengthen the hands of some of his fellow workers in institution schools if he were to offer some remarks derived from his considerable experience of such work. Although the book deals specially with the boys received into the institutional schools, yet we know of no class of boys or of instructors to which the sound sense contained in this volume does not apply. As the author truly says, "the key to all influence over children is to gain their confidence and love, if these be won the moulding of character becomes an easier task." Mr. Vine pleads for a preliminary diagnosis of character, for a consideration of the best place in which to put each boy, and for the thinking out and the adoption from the very first of a deliberate line of training to suit each boy. He also pleads for the special training of masters in the sacredness of their trust, in the study of discipline and how to enforce it, in the importance of conscientiousness in the discharge of duty, and in the domestic aspect and unity of the school household. The words "credo, spero, amo," express the principles which should animate institution work and school life, the chapters of this book inculcate the concrete application of them.

ST. MARY'S HOSPITAL.—At a special meeting of the supporters of this hospital held on May 9th under the presidency of Mr. H. A. Harben, chairman of the board of management, the Mayor of Paddington proposed a motion, which was unanimously adopted, to the effect "That this special meeting of governors and subscribers to St. Mary's Hospital is of opinion that it is of the highest importance to the welfare of the hospital that the £60,000 required (1) for the completion of the work of enlargement and improvement which has now been in progress for upwards of 12 years, and (2) for releasing the general maintenance fund from debt, be obtained without trenching on the small invested capital of the hospital which represents the accumulated savings of half a century, and that the annual income be increased to meet the enlarged expenditure entailed by the increased size of the hospital."

THE LANCET.

LONDON: SATURDAY, MAY 13, 1905.

International Amenities.

THE visit which is now being paid by British physicians and surgeons to Paris and to some of the French watering-places is an event calculated to afford much more than a merely temporary gratification. It is a step, and an important one, towards strengthening the ties of international friendship between free peoples who are in many respects complementary to each other and who have only been kept apart by artificial influences. The cordial alliance that subsisted between HENRI IV. and ELIZABETH, like that which subsists between the French Republic and ourselves to-day, should be regarded as a true expression of our proper relations with our nearest neighbours; and the traditional enmity between France and the England of GEORGE III. was a mere accident due to the opposition of a land of liberty to the ambition of NAPOLEON. The two countries have long ago returned to a more correct sense of their respective duties and obligations and to a conviction of the services which their union is certain to render to the causes of enlightenment and civilisation, and this conviction has been strengthened and confirmed by the consummate tact of our own gracious sovereign, as well as by the political sagacity of M. DELCASSÉ and of Lord LANSDOWNE. Nothing can be more suitable than that the members of the learned professions should follow the examples which have been set them by the rulers of the two countries and should seek, in the attainment of better knowledge of one another, a sure foundation for mutual respect and goodwill. It is to the Frenchman who does not know England or the English, and to the Englishman who does not know France or the French, that the enemies of both nations address themselves. We fear it is less common to-day than it was a generation or two ago for our medical students to regard a sojourn of some duration in Paris as a step essential to the completeness of their education; and the change is no doubt partly due to the greatly increased facilities for travelling which render it so easy "to run over" for a week. In former times, when a journey was a more serious undertaking than it is at present, those who went at all went to remain for a considerable period and, naturally, sought all available opportunities of studying under the great masters of medicine and of surgery and of making friendships of an enduring character. Of the consequences of those friendships some of us now in the decline of life have been privileged to speak and have met the greatest Frenchmen of their day at the houses of English entertainers. The visit of M. RICORD to London, soon after the termination of the Franco-German war, was an event which will live in many memories and which afforded to many of us an opportunity of hearing his own recollections of English worthies who had been the contemporaries of our grandparents.

In matters of science it is not the least of the many uses of friendship between nations that it facilitates new applications of discoveries in circumstances different from those in which they originated; and that it thus tends directly to increase their fruitfulness. It might be thought that philosophy would rise superior to national antipathies but such a view is not confirmed by experience. PASTEUR, in 1868, received from the University of Bonn an honorary diploma as Doctor of Medicine, in recognition of the fact that "par ses expériences très pénétrantes il avait le plus contribué à la connaissance de l'histoire de la génération des petits organismes et avait fait heureusement avancer la science des fermentations;" but in 1871 he declared the sight of the parchment to be odious to him and returned it to the Dean of the University, with the explanation, "Je me sens offensé de voir mon nom, avec la qualification de *Virum Clarissimum* dont vous le décorez, se trouver placé sous les auspices d'un nom voué désormais à l'exécration de ma patrie, celui de *Rex Gulielmus*." It would hardly have been possible in such circumstances as these for any German savant to have made the applications of PASTEUR'S discoveries which were made soon afterwards by Lord LISTER or to have obtained for them prompt and grateful recognition in his country, and the impediments to the progress of science arising from national antipathies have more than once been strongly displayed. At a great International Medical Congress held in Philadelphia in 1876 it was remarked by many of those present with what remarkable frequency representatives of the southern States were found to take views opposed to those which were put forward by representatives of the north, although the questions at issue were always purely scientific and although eleven years had elapsed since the termination of the Civil War.

The ordinary Englishman on a holiday, be he a physician, surgeon, or member of some other calling, is, as a rule, chiefly desirous to leave his profession behind him, and hence, even if he be in France, is little likely to become conversant with the improvements to which at first sight he might have been expected to attend. The physician or surgeon will be more likely to visit theatres than hospitals or museums and will be more likely to be brought into contact with the members of any other profession than with those of his own. It is therefore an especially valuable characteristic of the visit now in progress that it is definitely medical in its nature and objects and is devised as a means of enabling the profession in Paris to exhibit to their British *confrères* all that is most worthy of their professional notice. The time will be too short, the days will be too crowded, for much to be learnt even by visitors of the most inquiring minds and of the most retentive memories, but everyone will see something fresh and everyone will accomplish some sort of natural selection among the novelties that chiefly appeal to him. Above all, and in contradistinction to some of the instances already mentioned, the visitors will bring with them friendly eyes and a disposition to see the best and most useful aspects of all that is submitted to them. It would be an excellent thing if the organisation by which the present visit and the recent visit to London o

French physicians and surgeons have been planned and rendered effective could remain in existence as a more or less permanent institution, so arranged as to afford to practitioners on either side of the Channel information concerning whatever might be best worth seeing on the other, and with facilities for affording introductions which might help visitors on their way. Every step taken in this direction would be contributory to the intellectual fusion of the two nations and to the utilisation in each country of the somewhat differing powers and capacities of the other. We should like to see the revival of the old custom to which we have referred and the frequent sojourn in France of English medical students as an important part of their preparation for the serious work of their calling, more especially because such a procedure would convince both Frenchmen and Englishmen that a competent mastery of the tongue of the other country is a matter not wholly beyond the reach of ordinary care and diligence, and that it is one calculated to bring with it a rich reward. The suggestion brings to mind an old epigram which, if not strictly medical, may at least be said to have a medical aspect:—

"The French have taste in all they do,
While we must go without.
Nature to them has given *goût*,
But we have only gout!"

Accidents Connected with Motor-Cars.

AN answer recently given to a Member of Parliament by the Home Secretary shows that during last year the police reported 21,771 accidents as having been caused by horse-drawn vehicles and 2079 as due to motor-cars. These large figures, from which accidents connected with tramcars have been omitted, no doubt include many very trifling cases of collision to which the attention of the nearest policeman has been called and which have accordingly found their way into his note-book, but the proportion of those due to motor-cars is considerable. Still more is it noticeable when we turn to the number of fatal accidents, of which 120 were due to horse-drawn vehicles and 19 to motor-cars, including motor bicycles. If, moreover, the prominence given to motor accidents recently in the newspapers and their apparent increase in the streets of London afford any guide, we may hazard the opinion that for the current year the number of accidents and fatalities will be greater still. The matter is one of considerable interest to the public and particularly to the medical profession who can appreciate the nature of the injuries likely to be caused by motor-cars of any kind as compared with those inflicted by horsed vehicles of the lighter classes. Medical men also are not only users of motor-cars but of all members of the community have most frequently a good reason for wishing to be driven rapidly, while desiring to be so conveyed with the least possible danger to their neighbours. There are with motor-cars many dangers not connected with the desire for extreme speed, referred to in a recent annotation in THE LANCET under the heading "Motor Maniacs,"[1] but which may arise when the car is travelling well within the 20 miles per hour allowed by statute. These dangers may even in some measure be due to the ease with which the mechanical vehicle can be directed and handled and to the undue sense of confidence which it thus inspires.

Without analysing too minutely the psychology of the chauffeur and of the coachman we may suggest that the latter has more to compel him to caution than the former in the vulnerability or possible nervousness of his horse, and that when, for example, he approaches a blind corner he thinks as much of what may run into him as of what he will have to avoid running into. The instinct of the chauffeur crossing a main thoroughfare seems to urge him to use his speed in order to dart across it rather than to give way to the traffic occupying it. A chauffeur was recently fined £10 at the Marylebone police-court for acting in this manner, thereby endangering the safety of a hansom cab and its occupants. If, on the other hand, the driver of a motor-car desires to turn into the road which he has approached and to proceed along it—in other words, to go round a corner—he forgets that the ease (and safety to himself) with which he can do so may be a source of danger to foot passengers not aware of his intention. The coachman who advances towards a corner at a fast trot has to pull his horses together and to take them round it at a greatly reduced pace, and apart from such signal as he may give with his whip it is not difficult for those near to see what he is about to do. The motor-car, on the other hand, can spin round the angle without lessening what may seem to its driver a moderate speed but at a rate extremely startling and perhaps dangerous to the unwarned pedestrian who may have left the pavement. The hired motor-car driver, in short, has not got to consider his own safety and has not learnt to think of the safety of others; his apprenticeship, if he undergoes any, does not imbue him with the traditional courtesy of the road and he seems to be slow in acquiring it. A recent accident, reported in the newspapers owing to the resulting inquest, although death was not entirely due to the injuries inflicted, happened thus. A motor-car driver closely following an omnibus simultaneously quickened his speed and turned outwards in order to pass it, knocking down a foot-passenger who had safely crossed in front of the omnibus. There was another vehicle on the off-side of the motorist, so that he could not avoid the man, and as there was no time to pull up he ran into him. Three points may be referred to here as probably contributing to the accident, all of which directly affect the automobile. The driver, as a rule, is seated much lower than is the coachman and often assumes an attitude which suggests the easy chair rather than the alertness appropriate to the box-seat; consequently he is more likely to have his view of the road ahead of him shut out. The coachman driving behind another vehicle has his horse between him and it, and consequently can see farther to the right or to the left than the motorist, who can, and often does, follow so closely that the end of his car almost touches the obstruction in front of him. Here, again, is a cause which prevents him from seeing what is beyond until he has actually turned outwards in order to pass. When he desires to pass, moreover, the motor car driver can increase his speed with a rapidity impossible in the case of the horse, so that he is liable

[1] THE LANCET, April 22nd, p. 1083.

to dash upon whatever lies in his way with a suddenness unknown to the driver of horses. The essential point to remember where speed is concerned is that there may be plenty of time for the driver or for the person endangered to do what is required, but there may not be time for either of them to make up his mind on the subject. When we consider that a car travelling at the rate of 20 miles an hour traverses a fraction less than ten yards in a second we can easily understand the apparent helplessness of persons injured who, according to some of the opinions expressed after an accident, might have got out of the way.

The dangers occasioned by the tendency of the motor vehicle with indiarubber tyres to skid upon greasy roads appear to be regarded frequently by those driving as more or less inevitable accidents but are, as a rule, due to want of foresight and to the consequent sudden necessity of rapidly checking the speed. It is obvious that if a motor-car having only space in which to travel straight forward suddenly spins round and commences to proceed broadside on much damage may be done to vehicles, horses, and persons in its vicinity. If these occurrences are to be regarded as inevitable in muddy weather motorists will some day have the proposition submitted to them that vehicles which at certain times are inevitably dangerous must at those times be kept at home. An accident of this class was reported recently in the newspapers in which the vehicle which skidded was one of the large motor omnibuses of which a few are plying for hire and the vehicle with which it collided was a hansom cab. In another instance an electric motor-car is stated to have injured seriously the horses, van, and driver of a furniture remover. In considering the question of motor-car accidents the serious nature of the damage to person and property which such heavy vehicles must necessarily cause has to be considered, and in view of the threatened increase in the number of these vehicles many will feel doubts whether a mistake has not been made in placing the limits of weight permitted to a "light locomotive" so high. We have referred to omnibuses, some of which are of a size hitherto associated with tramcars rather than with ordinary road vehicles. A few of these are to be seen here and there threading their way through the more slowly moving horse traffic without much apparent difficulty. It will be a very different matter when a large proportion of the vehicles of the great omnibus companies and of rival organisations are of this type and are competing with one another for passengers. This and the probable increase of motor traffic of all kinds will render our streets extremely dangerous unless care is enforced upon drivers far more strictly than it has been up to the present and by different means.

Identification by Finger Prints.

THE question of the value of the impressions of the ridges on the palmar surface of the hands, especially those on the terminal divisions of the digits, for the purposes of establishing identity has of late years come prominently to the front, and events at a recent trial for murder have brought the whole matter into particular prominence just now. It has long been known that the patterns formed by the palmar ridges show a considerable variety both in their general arrangement and in detail, and when a clear impression of these is placed on paper or other suitable smooth surface and compared with another clear impression, taken previously or subsequently, of the same digit it is not usually a matter of much difficulty to recognise the similarity and minute correspondence that exist between them. Again, if clear impressions have been taken of different fingers their diversity is readily apparent on comparison, especially if the patterns be not very closely allied, but in other instances it may be necessary with the aid of a magnifying glass to study more or less carefully and in detail the various parts of the print before being able to determine their dissimilarity. The task of determining the identity or non-identity of a set of finger prints is rendered more easy by the fact that if the patterns of any two corresponding digits be not very apparent there are nine other pairs which are available for comparison, the agreement or disagreement of each successive pair of which confirms the identity or non-identity of the prints compared in an ever increasing ratio till the certainty of the result may be absolutely relied upon. On the average each digit gives about 35 points of comparison, so that the mass of evidence afforded by the ten digits is very great, and the factor of personal error is reduced to a minimum, as the digit itself is made to record on the paper the data which it contains. In classifying records of finger prints their small size necessitates in many cases the use of a magnifying glass for their examination, which is decidedly a drawback, but the expert very quickly gets accustomed to the work and is able to do it accurately and rapidly.

Prints of all the fingers of prisoners who have been convicted in this country and sentenced to imprisonment for certain crimes are taken previously to their liberation at the expiration of their sentences and are sent to the Metropolitan Police Office for record. If in a set of prints of any prisoner some are faulty they can be retaken before his discharge from prison; a good set of prints can therefore be secured for classifying at headquarters together with the particulars as to every such prisoner's conviction. In the prisons certain officers are specially selected for the purpose of taking finger impressions and with the practice which they now have they are able to produce good work. An unconvicted prisoner may, on a regular application made in writing to a magistrate being granted, be required to submit to the impressions of his fingers being taken by a prison officer with the view to ascertain whether he has been previously convicted of any offence. Here, again, the prints are taken by practised officers and sought for and compared at the Metropolitan Police Office by equally practised persons. When a set of finger impressions previously taken in a prison is found by the officers of police in the central office to agree with another such set sent from a prison, in most cases it may be safely assumed that the identification is correct, notwithstanding that the two sets of impressions have only passed through the hands of men with no knowledge of the anatomy of the fingers and with only the average education of policemen. But in the interval which has elapsed between the taking of the two sets of impressions cuts and injuries to one or more of the fingers

may have occurred whereby the data for comparison may have been diminished. It is therefore, perhaps, somewhat an open question whether, in the interests of the public, in cases where previous conviction is to be proved against a prisoner, the data should not first be submitted for confirmation to some independent authority possessed of anatomical and physiological knowledge. The state of the law on the subject of proving previous convictions against a prisoner is so highly unsatisfactory and dangerous that to get the unchecked testimony as to identity derived from the impressions of several fingers as a backing to mere memory is a decided advance, but too much stress must not be laid upon the backing. Recognition by memory of the prisoner by someone present at his previous trial and conviction is the usual means employed at the present time of proving previous convictions in court. Some police officers, no doubt, have good memories for faces, but the reliance that is to be placed upon such recognition after perhaps an interval of several years is obviously most uncertain. Identification by finger prints is here very valuable but the identification should be made by properly expert persons.

Turning now to the employment in other circumstances of finger impressions for purposes of identification—namely, when a digital impression is discovered on some substance at the scene of a crime and comparison of that impression is made with the prints of the fingers of a person arrested on suspicion of being the perpetrator of the crime—a very different condition of affairs obtains. The prints of the person under arrest are made on paper from the fingers properly inked—that is to say, with the tops of the ridges covered with ink of an exact consistency and the furrows between them free from ink. But the impression of the digit found at the scene of the crime has been the result of the contact of a finger moistened by the natural excretions of the skin or in some cases it may be by blood; dust or dirt of one kind or another will be on the surface of the finger; the surface on which the impression is found will vary and may not be of a nature suitable to record a satisfactory impression—all these things, which might be multiplied, make a fair comparison between such an impression and what may be called an official impression difficult, while the pressure with which the impression may have been made introduces another complexity to the already unequal conditions. In fact, the widest possible range of variation may occur in casual finger imprints from a good clear impression of the whole, or part of it, as is sometimes found on glass or porcelain, to a blurred or imperfect print upon a poor medium out of which it is well nigh impossible to obtain any information. In such cases great skill and caution are necessary to read the imprints and the ultimate certainty on which any statement as to identity can be based is enormously reduced, particularly if an impression of one finger only, presenting a few points of similarity, is available. In such a case the importance to be attached to the absence of clear points in the accidental impression corresponding to those in a carefully taken impression, even although the general pattern of the two prints corresponds, becomes very real, and for the due consideration of the matter it seems to us that the person called upon to examine and to advise as to identity or non-identity should possess thorough and practical knowledge as well as trained mental powers of discrimination. To intrust the duty to partially skilled persons is in the highest degree dangerous from a public point of view.

Annotations.

"Ne quid nimis."

THE METROPOLITAN HOSPITAL SUNDAY FUND.

Mr. George Herring has again offered to add one-fourth to any amount collected in places of worship on Hospital Sunday, his liability not to exceed £25,000. In a letter addressed to the secretary of the Fund in which he makes this offer he adds: "I hope the calls on the charitable for building purposes will not decrease the collections for the *maintenance* of the hospitals, as I think that should be the primary object." As was pointed out at a meeting of the council of the Fund held at the Mansion House, under the presidency of the Lord Mayor, on May 9th, it rests wholly with the congregations attending the various places of worship in the metropolis whether the full amount of £25,000 can be secured. The motion that Mr. Herring's munificent offer should be accepted was received with unanimous acclamation by the council and we know that he has the gratitude of the whole of the community, the individual members of which will, we trust, this year show that gratitude in a practical manner and enable the generous giver to contribute the £25,000 which he offers towards the maintenance of the sick and suffering poor of London. It would be most regrettable if the appeals which are now being made on behalf of the building funds of various London hospitals should influence detrimentally the subscriptions to the Metropolitan Hospital Sunday Fund. That great efforts will be made this year to reach a record collection we have every reason to hope, especially as, on the suggestion of Mr. Deputy Wallace, the representative of the Corporation of London, the Lord Mayor has promised to send a letter to the various mayors of the metropolitan boroughs asking them to call attention to the Fund and personally to address letters to the clergy on the matter. Among the members of the council present at this meeting were, in addition to the Lord Mayor, Sir Sydney Waterlow, who has been chairman of the Distribution Committee for the past 34 years, the Ven. Archdeacon Sinclair, the Chief Rabbi, Sir John Bell, Mr. Felix Schuster, Mr. Wakley, Dr. J. G. Glover, Mr. Thomas Bryant, and Mr. Alfred Willett.

VINCENT'S ANGINA.

IN THE LANCET of July 16th, 1904, p. 135, we published a paper from the pen of Dr. H. W. Bruce on Vincent's Angina. This form of pseudo-diphtheria, which was first described by Vincent in 1898, is important because it is a disease which is very likely to be mistaken for diphtheria and in that case, as Dr. Bruce well said, "the dread which that disease still inspires and all the inconveniences of isolation will be inflicted unnecessarily upon the patient. Treatment will be wrongly directed and prognosis will be faulty." At p. 1260 of our present issue will be found an article upon Vincent's angina from the pen of Professor Vincent himself. Professor Vincent was anxious, seeing that we had already published one paper upon the subject, to lay his own views in his own words before his professional brethren upon a disease which is but little known. As during this week British medical men are enjoying the hospitality of

their French *confrères* we have considered it a fitting opportunity for the publication of Professor Vincent's paper and we have thought it appropriate to give the paper in the language of its author rather than to translate it. Dr. Bruce's admirable paper was illustrated by an account of ten cases of the disease following a description of the clinical characters and bacteriology of the complaint. Professor Vincent, while giving no account of any particular cases, goes very fully into the symptomatology and diagnosis of the disease and mentions a point not considered by Dr. Bruce—namely, the treatment. This is simple and consists in the local application of iodine. To use Professor Vincent's words, this serves as a touchstone to differentiate between Vincent's angina and ulcerative syphilitic disease of the throat. We may hope that the publication of these two papers will draw the attention of our readers to a disease which, though not uncommon, is apparently frequently unrecognised.

UNIVERSITY COLLEGE, LONDON.

A COURSE of ten lectures will be given by Dr. W. Page May, Fellow of the College, on the Structure and Functions of the Central Nervous System, on Wednesdays, at 5 P.M. The subject of the first lecture, given on May 10th, was Methods of Investigation, Ganglion Cell and Nerve Fibre, the Nerve Arc, Degeneration, and Regeneration. The second lecture will describe the Spinal Cord, its Nuclei, its Conducting Paths, and questions of Localisation. Lectures 3 and 4 will deal with the Structure and Function of the Centres and Paths in the Brain Stem (Medulla, Pons, and Mid-brain). In Lecture 5 the Cerebellum, its Cortex, the Peduncles and their Functions will be described. The subject of Lecture 6 will be the Basal Ganglia, with Special Reference to the Optic Thalamus and Corpus Striatum. Lectures 7 and 8 will be devoted to the Centres and Paths of Vision, Taste, Hearing, and Smell. The subjects of Lectures 9 and 10 will be the Cerebral Hemispheres (Motor, Sensory, and Psychic Areas) and the Main Afferent and Efferent Paths of the Central Nervous System. These lectures are open to internal students of the University of London without fee as well as to medical practitioners on presentation of their cards.

THE STRUCTURE OF NERVES AND ITS APPLICATION TO NERVE ANASTOMOSIS.

IN the *Archives Générales de Médecine* of March 14th M. L. Bruandet and M. Humbert have published an important paper on the Structure of Nerves and its Application to the Operation of Nerve Anastomosis. They find that the fibres of a branch of a nerve do not lie adjacent to one another in the trunk but scattered among other fibres. They become grouped together only on emergence from the trunk or in the last few millimetres of their course in the trunk. This view might be confirmed by studying the degeneration in the branches of a nerve which follows hemisection of the trunk. Degeneration ought to be found in about half of the fibres of each branch. M. Bruandet and M. Humbert have not performed this delicate anatomical study but they have made the corresponding physiological experiment. They performed hemisection of the sciatic nerve of a dog and found that the same motor effects were produced when the nerve was stimulated above the point of section as when stimulated below it. Moreover, the animal was able to perform all the movements of the limb in locomotion. Cases of accidental incomplete wounds of nerves point to the same conclusion: movements are not seriously affected. Thus the nervous supply of the muscles seems to be normally in excess of what is necessary and therefore can be reduced considerably without much loss of movement. A similar phenomenon is observed in the vascular system. A large vessel may be suddenly occluded and yet a blood supply reduced by one-half, furnished by the collateral circulation, is sufficient for the tissues. A parallel may also be found in the vegetable kingdom: when half of the trunk of a tree is destroyed by accident the branches continue to live. These facts are not merely of theoretical interest but have an important bearing on the recent operation of nerve anastomosis. In cases of facial paralysis anastomosis of the facial nerve with the divided glossopharyngeal, hypoglossal, or spinal accessory nerve has been performed. But the gain in motion of the facial muscles has been accompanied by loss in the muscles supplied by the nerve used for the anastomosis. Section of the spinal accessory nerve for purposes of anastomosis is followed by paralysis of the trapezius muscle. Hemisection of the nerve is quite sufficient for innervating the facial muscles and is not followed by paralysis of the trapezius. In using nerves more important than the spinal accessory the desire to preserve their function has led to unsuccessful operations. In cases of destruction of the ulnar nerve the lower end has been anastomosed to the median but in order to preserve the function of the latter a "buttonhole" has been made in it into which the end of the ulnar nerve has been implanted. But the operation of nerve suture shows that axis cylinders should be opposed to axis cylinders. To implant the ulnar nerve in the connective tissue of the median nerve is useless. The operation which should be performed, according to M. Bruandet and M. Humbert, is to separate some of the fibres of the median nerve and to unite them to the ulnar, thus preserving the function of the former and restoring that of the latter. The most important function of the hand—prehension—will thus be restored without even the necessity of re-education of the nerve centres, for in this act all the muscles supplied by the median and the ulnar nerves take part. Possibly the action will not be as energetic as formerly but it will be sufficient for ordinary purposes.

AMERICAN QUACK NOSTRUMS.

IN view of the great number of American quack nostrums that are widely sold in this country chiefly by the aid of advertisements in magazines and newspapers it is of interest to read in the *Pharmaceutical Journal*, vol. lxxiv., p. 223, the results of the analysis of such preparations by Mr. Albert E. Leach, Government analyst of Massachusetts. Of "intemperance cures" there are many. In one case a five-dollar package consisted of two bottles of liquid, yielding respectively 41·1 and 28·2 per cent. of alcohol by volume, together with a small bottle of pills containing nux vomica and coated with a very thin layer of gold foil. In another case 12 powders in a box and sold for $1 were found to contain ammonium chloride and milk sugar but were free from gold and alkaloids which were stated to be present. Many "tonics" and "bitters" are sold in the United States for a similar purpose bearing various attractive recommendations, a few of which are here quoted: "purely vegetable, recommended for inebriates," this liquor contained no less than 41·6 per cent. of alcohol; "entirely free from alcoholic stimulant," yielded 25·6 per cent. of alcohol; "sulphur bitters, contains no alcohol," this preparation actually contained 29·5 per cent. but was free from sulphur; "a non-intoxicating stimulant; whisky without its sting," gave 28·2 per cent. of alcohol; and "liquid beef tonic, recommended for treatment of alcoholic habit," contained 26·5 per cent. of alcohol. Next to this type of fraud comes the class of diabetic flours or wheaten glutens. Of 11 samples examined starch was present in all, the lowest yield being 10 per cent., two others under 20 per cent., two between 50 and 60 per cent., and six between 60 and 70 per cent. One sample containing

59 per cent. of starch was described by the proprietor as "protein in its purest form." The price for these flours varied from 11 to 50 cents per pound. Taking cigarettes next, the —— brand of Medicated Cinnamon Cigarettes, purporting to contain no tobacco, were actually found to contain a large proportion, together with cassia and other aromatic herbs. The Massachusetts Department of Agriculture takes quite a fatherly interest in the consumers of proprietary medicines, whether intended for inward or outward application. The report contains a list of hair restorers, some of them well known in this country, giving the amount of lead present. In the 12 articles analysed the percentage varied from 0·3 to 2·32. Nine toilet preparations were found to contain mercuric chloride or some other poisonous salt of mercury in proportions varying from 1 to 15 grains per ounce. In one case a six-ounce bottle contained no less than 47 grains of corrosive sublimate. Some of these preparations have already found a ready market in this country and doubtless others will follow in due course. The advertising managers of many of our most widely circulated newspapers and magazines will accord them a cordial reception, with the result that the public, with simple faith in what they read, will buy them as eagerly as they have done in the past. It is surely time that some official control was exercised over this growing evil. Cases have been known of anxious wives denying themselves everything but the bare necessities of life in order to save the necessary shillings, and even pounds, in order to purchase an elixir which should cure their husbands of a craving for alcohol. These frauds have been exposed again and again but still the Government, by insisting on the use of a revenue stamp, appears to give these nostrums an official value in the eyes of a certain section of the public. In France and Germany a rigid control is exercised over the import and the sale of proprietary medicines and in some of the States of North America the departments of agriculture in an official publication name the preparations which have been analysed and found to be fraudulent. Fraud takes many forms but by the law of this country it is not fraudulent to sell a worthless preparation for an exorbitant price or to claim for it healing or dietetic properties which it does not possess. There is a punishment for the convicted thief and the forger but for the individual who charges an extortionate price for his worthless or almost worthless nostrum and holds out false hopes of its healing properties we have only a Government department which steps in and says: You shall affix a 1½*d.* stamp on every package of the value of 1*s.* and if the value of the article is 2*s.* 6*d.* a 3*d.* stamp must be used. The subject is a difficult one to deal with but none the less it requires prompt and drastic treatment. No reform would be complete without prohibiting the sale of nostrums proved to be worthless or dangerous.

ABNORMALITIES OF THE GALL-BLADDER AND THE APPENDIX VERMIFORMIS.

THE two instances of abnormality occurring in the practice of Dr. W. K. Bouton of Melbourne and communicated to us (*vide* p. 1265) by Dr. Ferguson Lemon are of more than passing interest. In the first case the gall-bladder, although in its normal position, was so embedded in the substance of the right lobe of the liver as to simulate a hydatid cyst. We infer from the description that liver substance completely ensheathed the organ; if this were so the condition is quite new to us. In our issue of Dec. 3rd, 1904, p. 1584, we published an annotation on abnormalities of the gall-bladder but knew of no instance of the condition now described. It is a matter of common knowledge that a bridge of liver tissue may be found arching across the umbilical fissure and concealing the round ligament. A similar bridge occasionally conceals the vena cava inferior. It is possible that a band of liver substance extending across the fossa for the gall-bladder might cause the appearance noted by our correspondent. In the second case the greater part of the vermiform appendix was adherent to the front of the ascending colon and near its tip had perforated into the peritoneal cavity. The proximal part of the appendix lay free and it was by tracing this upwards that the nature of the perforation was discovered. The consensus of opinion is that when an appendix is adherent and so extraperitoneal the adhesion is the result of inflammation at some earlier period and this appears to be a possible explanation of the condition of affairs described by Dr. Lemon. In some cases it is conceivable that during the descent of the cæcum and ascending colon with its mesocolon the appendix lags behind under cover of the latter and may be permanently retained in this position when the developmental adhesion of the mesocolon to the lumbar walls takes place.

VITAL STATISTICS IN EGYPT.

IN his annual report on the condition of Egypt for 1904 Lord Cromer says that the want of full and trustworthy statistics in Egypt has for a long time past been felt both in commercial and official circles. With a view to remedy this serious defect M. Randone, an official of the Custom House department who had shown special aptitude in the preparation of trade statistics, was therefore deputed by the Egyptian Government to visit Germany and Italy in the course of last summer in order to study the systems in force in those countries. In a very interesting report which he subsequently submitted M. Randone remarks: "The work will be easy so long as one has to occupy oneself with commercial matters and the statistics which concern the postal and telegraph services, the railways, navigation, &c., but as soon as one approaches the more important questions of internal economy, such as the registration of births, deaths, marriages, and divorces, the causes of mortality, the professions, cattle, cultivation, and everything that concerns agriculture, that great source of the wealth of the country, one will necessarily encounter numerous difficulties which it will only be possible to remedy gradually." The attempt, however, is to be made and a sum of £E.5000 has been provided in the estimates for the current year with the object of taking some preliminary steps towards the establishment of a statistical service. The introduction of vital statistics into modern Egypt dates from the time of Clot Bey who entered the service of Mahomed Ali in 1825. Writing to the Minister of Agriculture and Commerce at Paris on August 22nd, 1851, Dr. Clot's successor, Dr. Burguières, was able to say: "I can affirm that at present no decease of a suspicious nature can escape the watchfulness of the sanitary authorities. The exact number of deaths being known day by day, not only in the towns but even in the smallest villages of Egypt, the slightest increase of mortality must awaken the vigilance of the officials who at once cause an investigation to be made." The exactitude of this statement may, perhaps, be questioned but, be this as it may, there can be no doubt that when the English took charge of Egypt in 1882 the registration of births and deaths was not only worthless from a statistical point of view but also a fruitful source of illicit gain to the universally corrupt sanitary officials. A new system of registration, the work of Franz Engel Bey, was introduced in June, 1885, when registers for births and deaths, drawn up in French and Arabic, were distributed to the larger towns in Lower Egypt. In the following year the system was extended to the towns in Upper Egypt and by the commencement of 1887 every village in the country possessing 300 inhabitants and upwards was supplied. In this way a beginning was

made but the results were necessarily more or less imperfect owing to lack of funds for the remuneration of an efficient staff of registrars. It is to be hoped that now at last the sanitary department may be given the power to carry out efficiently the important duty which it has so long and so creditably tried to accomplish with utterly insufficient means.

PULMONARY FISTULA.

PULMONARY fistula (a communication between the lung and the surface of the body) is seldom observed though it has formed the subject of a number of monographs. At the meeting of the Société Médicale des Hôpitaux of Paris on March 9th M. C. Achard and M. Louis Ramond communicated an important paper on this subject. The causes of pulmonary fistula are various. Previous adhesion of the two layers of the pleuræ to one another being a necessary condition for their production they are rarely traumatic—due to a penetrating wound of the chest. For the same reason they always occur in the course of chronic diseases. They generally originate from an infectious focus which begins outside the lung or in the lung itself; more rarely there are two foci which are first independent and then become fused. The extra-pulmonary foci occur in the skin, in the subcutaneous tissue, in the bones of the thorax, or in the cervical glands. Most often the cause is a tuberculous lesion of the soft parts or of the bones; sometimes it is actinomycosis or cancer of the breast. Pulmonary foci are much the more frequent. They almost always are due to chronic tuberculosis. Rarely they are due to abscess, actinomycosis, gangrene of the lung, bronchiectasis, or empyema. The pulmonary focus ruptures both into a bronchus and into the skin. The following case was related. A man, aged 49 years, was admitted into hospital on August 26th, 1904. In 1870 he was wounded in the battle of Gravelotte by a bullet which passed through his chest. The wounds were a long time in healing and he was in hospital for two years. In the spring of 1900 he had hæmoptysis and again in the summer of 1902. Since the first of these periods he suffered from cough. On examination large cicatrices were seen on his chest. That of the orifice of entry of the bullet was situated four fingers' breadth below, and a little outside, the left nipple, below the sixth rib. That of the orifice of exit was a little below, and outside, the inferior angle of the left scapula. At the left apex in front there were dulness and subcrepitant râles; behind there were dulness in the whole extent of the lung and cavernous breathing and gurgling in the lower two-thirds. On the right side the apex was dull in front and subcrepitant râles were heard over the scapula. There was abundant purulent expectoration. The evening temperature was 101° F. Some days after admission the patient complained of acute pain in the left shoulder. On August 31st a reddish fluctuating swelling was found in the position of the dorsal cicatrix. On Sept. 1st it broke spontaneously and a thick yellowish liquid resembling tuberculous pus flowed out. On the following days the discharge increased and at the same time the expectoration diminished. In the discharge white blood corpuscles and tubercle bacilli were found. The opening enlarged and became crateriform and its borders ulcerated. When the patient coughed air escaped and projected drops of pus. This "fistulous cough" was accompanied by a sound resembling that of the discharge of gas from the anus. On auscultation a loud souffle was heard at the left base with a timbre more tubular than amphoric, no doubt due to induration of the lung around the bronchi and cavities by which air passed into the fistula. The patient left hospital on his own initiative on Oct. 10th. He returned on the 24th much emaciated. The fistula continued to discharge pus on coughing or on deep inspiration. On Dec. 13th hæmorrhage suddenly occurred from the mouth, the nose, and the fistula and death took place in a few minutes. The necropsy showed on the left side of the chest a thick whitish deposit which extended from the clavicle to the diaphragm and covered the lung and pericardium. It was firmly adherent to the organs and had to be dissected from the internal surface of the ribs in order to remove the lung. The deposit formed a dense fibrous coat one and a half centimetres thick over the lung and sent fibrous bands into the latter. The larger bronchi were dilated. Only islets of lung tissue were recognisable. At the apex were irregular cavities which communicated with one another and with a huge cavity in the thickened pleura. At the lower part of the latter cavity was the internal orifice of the fistula. Below it was a thick fibrous mass which extended to the diaphragm. The fistulous track was very irregular and complicated. All the cavities, pleural and pulmonary, and the fistula were filled with blood clot. The right lung showed ordinary tuberculous lesions. M. Achard and M. Ramond think that the wound of the lung, which took such a long time to heal, gave rise to sclerosis and pleural adhesions, impairing the mobility of the left lung and rendering its vulnerability to tuberculosis much greater than that of the right lung. Just as an abscess travels along fibrous aponeuroses, so, they think, the tuberculosis extended along the cicatricial bands, which, so to speak, conducted it to the skin. Hence also is explained the exception in this case to the rule that pulmonary fistulæ secondary to tuberculosis are situated at the apex of the lung.

THE ILKLEY CORONATION COTTAGE HOSPITAL

ILKLEY is a small town with a population of some 6000 in the West Riding of Yorkshire and it decided to erect a cottage hospital as a memorial of the coronation of their Majesties the King and Queen. The medical profession of the neighbourhood warmly supported the scheme, a sum of £2500 was subscribed, a building to accommodate nine patients and the necessary nursing staff was planned and erected, and on April 15th the hospital was formally opened by Professor John Chiene of the University of Edinburgh. The proceedings commenced with a luncheon given by Dr. T. Johnstone. At the opening ceremony itself Mr. B. Nussey, the chairman of the hospital committee, in his speech requesting Professor Chiene to declare the building open, referred to all those who had helped them. In mentioning the Ilkley District Nursing Association, the work of which would now be carried on in connexion with the new hospital, Mr. Nussey said that he must specially commemorate the late Miss Maude who had taken such interest in district nursing and who had bequeathed £500 to the association. He concluded by welcoming Professor Chiene and presented him with a key in memory of the occasion. Professor Chiene in the course of his address drew attention to the fact that cottage hospitals practically began to be built in 1864, a date which coincided with the great movement in surgery which is for ever connected with the name of Lister. He was glad to see that the hospital was to be open for all practitioners in Ilkley to come and to attend their patients. He went on to advise that in cases of accident there should be one medical man appointed to attend to all such for a certain period and that medical man should have an understudy. At the end of the period the chief should become the understudy and the understudy the chief, so would they all learn the value of service. Professor Chiene concluded by referring to the question of the difference in economy of management between Scottish and English hospitals. We are glad to join with Professor Chiene in congratulating Ilkley on the successful realisation

of its scheme. A cottage hospital if worked on a sound footing such as has been laid down for the working of that at Ilkley is of inestimable value and we have no doubt that the Ilkley Coronation Cottage Hospital will be a worthy memorial of the event which all concerned have worked so loyal y to commemorate.

THE AMOUNTS OF NEON, HELION, AND HYDROGEN IN THE AIR.

SOME time ago we predicted that the ingenious method discovered by Sir James Dewar of using cooled cocoanut charcoal as an absorbent for gases would give considerable assistance to the experimental study of the rare gases of the atmosphere. Sir William Ramsay has not been slow to avail himself at all events of the advantages and convenience of this method. By exposing relatively large quantities of air to charcoal at $-100°$ C. considerable absorption or condensation took place and the helion and neon were concentrated inasmuch as at that temperature neither element is absorbed in an appreciable quantity. In this way it was possible to deal with 18 litres of air. The quantities found were as follows: one volume of neon in 80,790 volumes of air and one volume of helion in 245,300 volumes of air. These figures proved to be somewhat near a guess made by the same investigator and his colleague, Dr. Morris Travers, in connexion with the investigation in another direction. Incidentally Sir William Ramsay concludes that the amount of free hydrogen in the air must be less than $\frac{1}{100}$th of the volume of combined neon and helion, as the residue of neon and helion must have contained all the free hydrogen in the volume of air used for the experiment. It is hardly possible in the face of these results to attach any significance to the presence in the air of such minute quantities of the gases described, but, of course, it is conceivable that in the neighbourhood of thermal waters a greater proportion would be found.

THE PROPHYLACTIC INJECTION OF DIPHTHERIA ANTITOXIN.

THE experience in Germany of prophylactic injections of diphtheria antitoxin as recorded in two recent papers is so satisfactory as to merit notice. Dr. J. Ibraham of Heidelberg relates his results at the University Children's Clinique of that town in the *Deutsche Medicinische Wochenschrift*, No. 11, 1905, while Professor Wesener of Aix-la-Chapelle, in the *Münchener Medicinische Wochenschrift*, No. 12, 1905, states that for the last 18 months he has administered prophylactic injections of antitoxin in nearly all cases of children exposed to possible infection coming under his observation at the Mariahilf Hospital, and amongst others to the relatives of children taken to the hospital on account of diphtheria. The results obtained by both observers are in almost complete accord. Dr. Ibraham only found one case which developed the disease in spite of the injection and in this one there was at the same time infection by measles and whooping-cough. He comes to the conclusion that all the members of a family in which a case of diphtheria occurs, especially children under ten years of age, should receive prophylactic doses of antitoxin. He recommends that at least from 250 to 300 units of antitoxin should be injected in the case of healthy children, but if the child is suffering from measles, scarlet fever, or whooping-cough the dose should be increased to 500 units. No reduction of dose is necessary for sucklings or young infants. The protection conferred by such doses lasts about three weeks. Professor Wesener regards the method as one offering a valuable but not absolute protection, lasting from three to four weeks, and therefore of sufficient length to adopt ordinary prophylactic measures against spread and to disinfect infected buildings. Even when diphtheria occurs in spite of the injection of prophylactic doses, whether owing to subsequent infection or to infection before the injection, the course of the case is usually mild. He thinks that in most cases 200 units are sufficient to give protection but recommends the employment of from 300 to 400 units if possible.

THE LONDON SCHOOL OF TROPICAL MEDICINE.

THE banquet held on Wednesday evening with the object of relieving the London School of Tropical Medicine from a heavy burden of debt has drawn public attention, mainly through Mr. Chamberlain's forceful speech, to the affairs and performances of a most deserving scientific institution. Although it has been but a few years in existence the school has done excellent work and has established some striking facts. We need not recall to our readers the proof of the mosquito theory of malaria that was given to the medical world by the *experimentum in corpore vili* at the hands of Dr. L. W. Sambon and Dr. G. C. Low by their sojourn in the Roman Campagna at the most malarious season of the year in a mosquito-proof hut, owing to which precaution they remained free from the disease and not only so but in robust health. And this connexion between malaria infected mosquitoes and the disease in man was also proved by the demonstration that the former transported for a great distance into a non-malarial country could by their bites then infect human beings here. Another pupil of the school, Dr. A. Castellani, discovered the association of a trypanosome with sleeping sickness. Still another research by another pupil demonstrated a new species of schistosomus. Important researches, moreover, are being carried on as regards the causation and the prevention of beriberi. Such are a few of the results that have been gained by the research work of pupils of the school. But in addition to the above research work, and even more important, is the educational curriculum that has led, and is leading, to it. Accommodation is provided for about 12 resident pupils, whilst 40 students can be instructed in the laboratory. There are three sessions, each of three months, held at the school. During these a most thorough laboratory course is carried out by the medical tutor, whilst the students have an opportunity of personally becoming conversant with many of the diseases that they will subsequently meet with in their career in the tropics. Already over 500 students have passed through the courses. Again, it may be mentioned that provision is made in the hospital for the admission of sufferers from tropical diseases who are unable to afford the luxuries of a nursing home. Finally, the work of the school is being supplemented by the establishment of laboratories in several colonial medical centres, such as Kuala Lumpur, Ceylon, and Hong-Kong. It is thus seen what a void in our system of medical education this school and the Liverpool School of Tropical Medicine are filling. Formerly the medical officer proceeding to his work in tropical climates had first of all to learn it in those regions; now he can proceed thither having first mastered the elements of this portion of the medical art. England is the great colonising country of the world; how great, then, is the necessity for the various deadly diseases to be understood fully by those of her sons who proceed to the colonies, the home of these diseases. We cordially wish this school and its staff the fullest measure of success that will doubtless in the future accrue to their endeavours. But in order to insure this object funds are necessary and we feel sure that the British public, once it is alive to the great benefits which the school is conferring, will not be backward in supplying them. As the Duke of Marlborough has stated in a public appeal, an increasing number of our kith and kin are annually required to carry on the work in the tropics,

where the white man's burden is the heaviest, and it is undoubtedly a matter of Imperial importance that a knowledge of the etiology and treatment of the diseases to be met with in the tropics should be obtained. The London School of Tropical Medicine should not be hampered in its work by the shackles of debt and we are glad to learn that since Wednesday evening its coffers have been enriched by upwards of £10,000.

THE MEDICAL SOCIETY OF LONDON.

THE President and Council of the Medical Society of London will give a conversazione in the rooms of the society, 11, Chandos-street, Cavendish-square, W., on Monday next, May 15th. There will be a reception by the President at 8.30 P.M., when the Fothergillian medal will be presented by the President to Sir Frederick Treves, G.C.V.O., LL.D., F.R.C.S. The oration will then be delivered by Mr. Henry Morris who has taken as his subject the Financial Relations existing between the London Hospitals and the Associated Medical Schools and the Bearing of these Relations on Medical Education in London. At the conversazione there will be smoking and music by Pitman's Blue Viennese Orchestra.

THE NATIONAL ASSOCIATION FOR THE PREVENTION OF CONSUMPTION AND OTHER FORMS OF TUBERCULOSIS.

THE Lord Mayor of London has announced a Mansion House meeting to be held in aid of the work of the above-mentioned association on Wednesday, May 17th, at 3 P.M. The association is so well known to our readers that we need not refer to it at length here, but it may shortly be said that its chief work consists in measures for improving prophylaxis by advocating various hygienic measures and by the dissemination of literature to educate and to advise the public. With regard to treatment, the association is doing good work in endeavouring to make it plain that certain cases only of tuberculosis—namely, those in an early stage—are fitting subjects for sanatorium treatment. The work of the association is much hampered for want of funds and at the meeting in question an appeal will be made for £10,000. To quote the words of the notification, "Scientific research during the last half century, and especially during the last 20 years, has made plain the conditions which favour the spread of the disease and has shown how largely it is preventable." This is a true statement and one which should bring home to every mind the necessity for not allowing the good work which the association has already done to be more or less thrown away by a continuation of that work being hampered for want of money.

THE medical officer of health of the Cape Colony states that for the week ending April 15th the condition of the colony as regards plague was as follows. At King William's Town one case of plague, a native female, the wife of the patient reported during the previous week, was discovered. At East London three cases were discovered—namely, two coloured males and one European male. Plague-infected rodents were found at Port Elizabeth, Uitenhage, and East London and at the last-mentioned town there were also found two plague-infected cats. In other districts there was no case of plague in man or other animal. As regards Hong-Kong, a telegram from the Governor received at the Colonial Office on May 8th states that for the week ending May 5th there were eight cases of plague and seven deaths from the disease.

THE second annual meeting of the Rural Midwives Association will be held at 66, Ennismore-gardens, London, S.W., on Thursday, May 18th, at 2.45 P.M., the Earl of Harrowby in the chair. Dr. George Reid, the county medical officer of health of Staffordshire, Mr. G. H. Fosbroke, the county medical officer of health of Worcestershire, and Dr. Thomas Savage, of the Warwickshire county council, are expected to address the meeting.

THE annual general meeting of the Dermatological Society of Great Britain and Ireland will take place at 11, Chandos-street, Cavendish-square, London, W., on Wednesday, May 24th, at 4.30 P.M., Dr. Henry Waldo, the President, in the chair. Professor McCall Anderson will deliver an oration entitled "A Plea for the More General Use of Tuberculin by the Profession." Members of the medical profession interested in the subject of the oration are invited to attend the meeting.

THE University of London provides courses of advanced lectures in physiology and the first of a course of three on Carbohydrate Metabolism was delivered by Dr. F. W. Pavy on May 9th at the Physiological Laboratory of the University, South Kensington. The remaining two will be delivered at 5 P.M. on May 16th and 23rd. There is no fee for the lectures and cards of admission may be obtained on application to the Academic Registrar.

THE next meeting of the Edinburgh University Club of London will take place at the Criterion Restaurant on Wednesday, May 24th, at 7.30 P.M., when the Right Hon. Lord Robertson will occupy the chair. Among those who have accepted invitations from the club are the President of the General Medical Council, the President of the Royal College of Surgeons of England, and the Director General of the Army Medical Service.

THE position of president-elect of the Medico-Psychological Association having become vacant by the resignation of the late Sir John Sibbald the council of the association at its last meeting unanimously elected Dr. Outterson Wood to the vacancy. The election has been accepted by Dr. Wood who will therefore become President at the annual meeting in July next.

Professor W. Osler has departed from the United States to take up his residence in Oxford as Regius Professor of Medicine. 500 physicians gave him a farewell banquet in New York and presented him with a copy of Cicero's "De Senectute" in allusion to a much paragraphed and much distorted version of his recent address at Baltimore.

THE next meeting of the Society for the Study of Disease in Children will take place at 11, Chandos-street, London, W., on Friday, May 19th, when Dr. Henry Ashby of Manchester will deliver the Wightman lecture on Some of the Neuroses of Early Life. The meeting is open to all members of the medical profession.

AT a recent meeting of the United Grand Lodge of English Freemasons Mr. W. H. H. Jessop, F.R.C.S. Eng., Mr. Ernest Clarke, F.R.C.S. Eng., and Dr. H. G. Thompson were among the new Grand Officers appointed. Mr. T. H. Openshaw, F.R.C.S. Eng., received the honour of past grand office.

Sir Francis Laking, Bart., G.C.V.O., physician-in-ordinary to the King, who accompanied His Majesty upon his recent visit to France and French possessions, has been appointed a grand officer of the Legion of Honour.

The King has appointed Mr. Charles E. Truman, M.R.C.S. Eng., to be dentist to His Majesty's household, *vice* Mr. E. T. Truman, deceased.

VISIT OF BRITISH PHYSICIANS AND SURGEONS TO PARIS.

(FROM OUR OWN CORRESPONDENT.)

THE visit of British physicians and surgeons to Paris began auspiciously in perfect weather. The opening reception, which was organised by the University of Paris, took place at the Sorbonne on Wednesday evening and was fully attended by the visitors, and in many instances by their wives and families. The absence of M. Casimir Perier, who was, it is understood, too ill to deliver his promised address, was the subject of much regret, but the interchange of congratulations between the University Reception Committee and the London Executive Committee supplied sufficient speeches for the occasion, and, it may be added, their speeches were of a very happy character. Everything promises a most successful reunion.

Two small volumes or pamphlets have been published expressly for the benefit of the British medical men now on a visit to Paris. One, in French, consists of a short history of the ancient Faculty of Medicine and College of Surgeons of Paris. It is beautifully printed and illustrated and commences by recording that Charlemagne advised German youths to study medicine in Paris and invited an English teacher over to give them lessons. This was the philosopher and theologian Alcwin or Alcuin, who was born at York in 735. The little volume recalls this fact with pleasure, for it shows that from the first the University of Paris contracted a debt of gratitude to an English scholar. The work then traces, with quotations from old title deeds, charts, &c., the growth of the school of medicine and surgery, gives pictures of the various buildings which they occupied, and reproduces certain seals, portraits, headings of theses, and other engravings. Some of them are real works of art.

The other pamphlet is issued in English and is written by M. André Mésureur, the son and chief of the cabinet of M. Mésureur, director of the poor relief administrations of Paris (Assistance Publique). It is a practical guide with blank leaves for taking notes. A large coloured map of Paris serves to indicate the position of all the hospitals and of all the other places and offices that relate to the relief of the poor. Then there is a brief description with a photographic illustration of each of the principal hospitals. This is preceded by a short chapter giving a description of the Assistance Publique. It shows how the town of Paris assumes the responsibility for all the services of poor relief and the advantages that this affords in the organisation of the hospitals as representing the practical side of medical education at the University of Paris. M. André Mésureur also briefly alludes to the economic advantages of purchasing wholesale and in one single transaction the meat required for all the hospitals, asylums, and such institutions. These advantages exist likewise in all other respects, such as the bread-supply, milk, medicines, furniture, beds, and so on. Finally, the uniting together of all the poor relief services renders it more easy to ascertain particulars about the hospital patients and prevents the abuse of the hospitals by those who can afford to pay. The cost of all these services is defrayed to a large extent out of the income of the city. The last subvention from the city amounted to £1,120,000. Then there is a direct tax for the relief of the poor levied on every occupied seat at the theatres. This brings in £140,000. The other sources of income are not from taxation. £260,000 were received from lands, houses, and personal property. Fees and gifts from sick patients amounted to £208,000. With other smaller sources the income exceeds £2,000,000 annually for poor relief. The principal expenditure is as follows: hospitals, £820,000; outdoor relief, £500,000; almshouses, £400,000; and foundlings, £560,000. These few figures and facts set forth the great difference between the French system and the British voluntary efforts and the British Poor-law. To study on the spot these very important problems will be the more useful as the method of solution attempted in Paris is so completely different from that employed in England.

MEDICINE, ITS PRACTICE AND ITS PUBLIC RELATIONS.

CHAPTER XI.[1]

THE POOR-LAW AND MEDICAL SERVICE.

Poor-law Medical Service in England.—Good Work of Dr. Joseph Rogers.—Poor-law Medical Service in Scotland.—The Case of Mr. Lamont.—Parish Councils and Arbitrary Dismissals.—Scottish Poor-law Medical Association.

THE Poor-law medical services of England, Scotland, and Ireland, like the sanitary services of the three countries, are on different bases and with respect to the two last-named countries the abuses that are to be found in their working are gross. The grievances of the English service run a risk of being overlooked because they are of a less sensational character. They are none the less real.

The Poor-law Medical Service in England.

The English Poor-law medical officer's position, although it is good by comparison with that of his Scottish and Irish brethren, is not so perfect that there is anything ungracious in suggesting that it is open to many improvements. The position which it has is the outcome of the work of Dr. Joseph Rogers, founder and first president of the Poor-law Medical Officers' Association. Rogers, one of the numerous brothers of the well-known economist the late Professor Thorold Rogers, was a supernumerary medical officer in the parish of St. Anne's, Soho, at the time of the outbreak of cholera in that district of London in 1855. His work was rewarded by his appointment in the following year as medical officer to the Strand workhouse. Through his brother, as well as from natural taste, he became associated with the school of social reform of which Cobden and Bright were the leaders and as soon as he found himself in responsible charge he set to work, with the cordial coöperation of Thomas Wakley, the editor of THE LANCET, to improve the system of medical relief to the sick poor. The nursing, the diet, the accommodation, and the general amenities of life in workhouses and workhouse infirmaries were fair objects at that time of stringent criticism but Rogers's reforming zeal soon brought him into conflict with the guardians of the parish. The President of the Poor-law Board, the extinct Government department then responsible for the administration of the Poor-law, took the side of the supine authorities and Rogers lost his berth. In 1872, however, he was elected medical officer of the Westminster Infirmary, where he pursued the same humane and enlightened tactics. Complaints were again made of him as a troublesome fellow but this time the President of the Poor-law Board found that he was in the right and his admirers presented him with a testimonial. Perceiving that the same obstacles would be brought to bear upon any of his colleagues who might be inspired with similar humane ideas to his own, he founded the Poor-law Medical Officers' Association of which he was the first president.

His hopes that this association would grow into a powerful union have been but partially realised, because progress in the general sanitation of the country has taken place along other lines, but the efforts of Rogers and the small band associated with him count for much in the fact that the grievances of Poor-law medical officers in England are not so pronounced as they are in the other divisions of the kingdom. They are not oppressed by Bumbledom to the same extent and their position is altogether a more independent one. Still they are not without legitimate causes of complaint. The salaries of the medical officers to the Poor-law infirmaries are small and their exiguity is not counterbalanced by opportunities for private practice. The life is dull and a large proportion of the clinical material presents no features of interest to scientific medicine, though this is a state of things which is tending to improve. The salaries of parochial officers are also small but they are punctually paid. The fact that the Poor-law officer is, as a rule, the social superior of the guardians under whom he serves now and

[1] Chapters I., II., III., IV., V., VI., VII., VIII., IX., and X. were published in THE LANCET of Feb. 18th (p. 447) and 25th (p. 517), March 4th (p. 593), 18th (p. 736), and 25th (p. 817), April 1st (p. 877), 15th (p. 1017), 22nd (p. 1089), and 29th (p. 1151), and May 6th (p. 1218), 1905, respectively.

again results in annoyances, but a hard-working and tactful practitioner escapes most of the unpleasantness and the competition for the posts shows that they have distinct attraction. The explanation of this is probably that in some places the possession of Poor-law appointments brings compensating advantages in practice, a view that is strongly combated by those to whom no such advantages have accrued and who contend that the more substantial class of patients have an objection to employ the "parish doctor." Wherever in the social scheme we get competition for posts and complaints of inadequate remuneration going together there will be a difference of opinion as to the reason of such an apparent violation of the laws of supply and demand, and the fact that many desire to fill the berths will be employed as an argument to close the mouths of those who would assert that the berths are not worth filling. As a matter of fact, in the case of the Poor-law medical officer no general rule applies, as the scale of pecuniary return is not uniform and the attitude of the public and the Poor-law guardians is not the same all over the country.

It is an undoubted hardship upon Poor-law medical officers that in many instances the salaries remain the same as they were 40 years ago, in spite of the largely increased cost of living generally and of medical education and medical practice in particular. All medical men in general practice are suffering from the fact that their professional fees have remained for the most part stationary while everything incidental to medical education and practice has gone up in price, but Poor-law medical officers have an easily demonstrable claim upon the public for better terms. The special fees for operations were fixed in 1847 and have not been revised since. There are numerous operations, the outcome of advancing surgical knowledge, for which no special allowance can be obtained without the consent of the guardians, and there is no fee provided by law for giving anæsthetics. As far back as July, 1902, the President of the Local Government Board was asked in the House of Commons to explain why no provision was made for the administration of anæsthetics when operations had to be performed by Poor-law medical officers on sick paupers at a distance from a hospital or workhouse infirmary; and why no alteration had been made in the scale of fees allowed for special operations performed by Poor-law medical officers since the year 1847, many important operations, which have now become general, not having been placed on the original list. The President of the Local Government Board (at that time Mr. Long) replied that the Board recommended that in ordinary circumstances a case in which a serious operation was required should not be treated in a workhouse or at the patient's home but should be sent to a public hospital. This was the position taken up by the Board eight years previously in a circular letter issued to all boards of guardians, though in that letter it was stated that in any case, when it was not practicable to send the patient to the hospital, and when the operation was not of a serious character, the guardians might sanction the payment to the medical officer of a reasonable sum in respect of any assistance which it was necessary for him to obtain for the administration of an anæsthetic. Mr. Long went on to point out that it had been the invariable practice of the Board to give its sanction to reasonable payments proposed to be made by boards of guardians to medical officers in circumstances of the kind referred to, and added that he was unaware that difficulties had been experienced in connexion with the scale of fees to Poor-law medical officers for operations, but that if representations were made to him showing alterations to be required he would give the subject careful consideration. How Mr. Long came to be unaware of the dissatisfaction among Poor-law medical officers at the scale of fees for operations is difficult to understand but during his tenure of office as President of the Local Government Board he proved himself in many ways an enlightened advocate of medicine and we may feel certain that his want of information was real and not merely official. With his opinion that in ordinary circumstances patients requiring serious operations should not be treated in their homes all medical men are in agreement; it is not so certain that the recommendation to draft every important surgical case to a hospital in contradistinction to an infirmary is so sound. But the promise of careful consideration of the whole subject has not been kept by the Local Government Board. In December, 1902, encouraged by Mr. Long's kind words, the Poor-law Medical Officers' Association addressed a memorial to the Local Government Board pointing out that in spite of the Local Government Board's circular letter of 1894 guardians almost invariably declined to ask the sanction of the Board for the payment to medical men of fees for extra services, so that the Poor-law medical officer when requiring to perform an operation upon a pauper patient has either to obtain the unpaid assistance of a brother practitioner or to pay the anæsthetist's fee out of his own pocket. The memorial suggested that a fee of £1 should be paid for the administration of an anæsthetic, the payment being restricted, if thought well, to those instances where a certificate of its necessity is forthcoming from a second medical practitioner, while operations, now common procedures, like laryngotomy and tracheotomy, should be paid for at the rate of £2. The highest payment for operations on the present scale to Poor-law medical officers of health is £5, which is the legal fee for the treatment of strangulated hernia, of compound fractures or dislocations of the thigh or leg, and for major amputations. To this list the memorial proposed to add the operation of trephining and the treatment of a compound fracture of the patella, while for simple fracture of the patella a fee of £3 was asked. The memorial acquiesced in the general proposition that serious cases should be treated as far as possible in a hospital but dwelt upon the difficulties of Poor-law medical officers in country districts where it may be often impossible to move a patient to a hospital. In such cases the particular injustice done to the Poor-law medical officers in making them attend the patients without extra fees is aggravated by the fact that many hospitals receive from boards of guardians payments for the reception of cases for operation—the scale of which payments, by the way, might well be scrutinized. To this memorial the Poor-law Medical Officers' Association has received no reply. This is distinctly unfair to the association in view of Mr. Long's sympathetic words in Parliament and must necessarily confirm boards of guardians in their intention not to take any steps to grant extra fees.

The attitude of boards of guardians towards their medical officer differs considerably—in some districts the work is harmoniously carried on and in others it is not. In certain parts of the country boards of guardians have refused to raise the salaries of their medical officers, being public vaccinators, on the plea that the last Vaccination Act has increased the public vaccinator's fees, and some guardians have been attempting, where contracts have terminated, to reduce salaries on the same grounds. This is, of course, quite unfair. To begin with, any reduction of the salaries of Poor-law medical officers must be illogical considering the increasing work that now has to be done by them and the enhanced expenses of medical education and medical practice. In the second place, the emoluments received by public vaccinators, who are also district medical officers, vary so much that no general conclusion can be drawn from them. In some urban districts the public vaccinator's fees may pay him well, in some rural districts they certainly do not. But urban and rural districts alike, a request by medical officers for a higher salary based upon an increase of work and an increase of expenses is generally met with a refusal at the hands of the guardians, who quote in support of their action the vaccination fees.

Thus it will be seen that the grievances of the Poor-law medical officers in England are quite genuine, if not exactly glaring as they are in Scotland and Ireland. Their work has increased and their expenses have increased, while their salaries have remained the same, not without threats of curtailment. Yet there is considerable competition for the posts, so much that favouritism, it is alleged, takes place in respect of the appointments. How is this to be explained? Firstly, the pay offered by the unions, poor as it is, is better than that offered by medical aid associations. Secondly, the posts sometimes carry indirect advantages. There are readers of THE LANCET who may not endorse the statement, but it seems impossible to escape from the conclusion that these posts are accepted in certain instances because they provide the holders with a publicly guaranteed introduction to the neighbourhood. That such should be the fact is regrettable. Honest work should be worth proper payment, it should never have to look for indirect emolument, and one class of medical men should not be tempted to use their official position to the detriment of their brethren. These things are admitted, but it must also be admitted that the appointment of Poor-law medical officer is a good deal coveted.

The Poor-law Medical Service in Scotland.

In Scotland the public medical service, the service which is intended to meet the wants of the indigent poor, is in urgent need of reform. To go no further back than six years, attention was called in 1899 to the scandalous condition of affairs by the *cause célèbre* of Mr. J. Lamont, the medical officer of South Uist,[2] whose vicious treatment by the authority to whom he owed his appointment was made the subject of Parliamentary interference. Mr. Lamont was dismissed summarily from his office by the parochial authority, his dismissal being apparently due, at least to a great extent, to his insistence on the closure of a school during an epidemic of infectious disease. In this he had the support of the Local Government Board of Scotland but that availed nothing when, as a practical rejoinder, the parish council terminated his appointment. Following on his dismissal from office Mr. Lamont's oppressors in South Uist raked up the fact that he had some considerable time ago vaccinated certain children whom, owing to press of work and length of distance (or want of roads), he had certified as successfully vaccinated without paying a second visit, his certificates being based on what he regarded as trustworthy information. This he did in his inexperience and in the absence of official guidance as to his procedure; but it appears that the practice is by no means unknown in the northern counties of Scotland. It is an evil practice and no one should attempt to justify it; but the prosecution of Mr. Lamont was undertaken in a manner warranting the theory that its origin was to be sought, not in regard for the law or in zeal for vaccination, but in vindictive spite. It was the manner in which Mr. Lamont was treated that led to the publicity which may yet have a fortunate issue, as it has called attention to the grievances of the Poor-law medical service of Scotland, especially of those whose duties lie in the highlands and islands. Mr. Lamont was arrested at midnight in his mother's house on the allegation that he had absconded from justice, he was imprisoned for two days, was escorted from Glasgow to South Uist by the police, was imprisoned a second time, and on release was subjected to a fresh warrant of arrest in London. The nature of this persecution led to very downright speaking upon the existing conditions of the Scotch Poor-law medical service in the press. Then came action in Parliament. Sir Charles Cameron, in Committee of Supply, on the vote for the salaries and expenses of the office of Secretary for Scotland, called attention to the case, and, when the Lord Advocate defended the prosecution as right and justifiable upon the evidence, several influential Members of Parliament spoke in strong criticism of this view, asserting that Mr. Lamont had been harshly used and was entitled to some sort of compensation. The Lord Advocate then agreed that the arrest should not have been ordered and undertook to censure the Procurator-Fiscal, when the Prime Minister delivered an important pronouncement. He expressed his regret that in the present state of the law medical officers in Scotland had no protection against the arbitrary action of the local authorities and thought that the Government ought to possess the power to protect medical officers whose duties must occasionally bring them into collision with, and subject them to the arbitrary action of, those who were their employers and against whom at the same time it might be their duty to proceed. He pointed out that as the law stood no Vote in Supply could affect the matter at issue one way or another, directly or indirectly, but he discussed the question whether any action could be taken against the local authorities who, it appeared from the discussion, were the real villains of the piece. The Lord Advocate at the close of the discussion announced that he had the authority of the Prime Minister to say that he considered himself bound to look into the question of compensation.

Mr. Balfour's words raised all the issues admirably because he so clearly distinguished between the great grievances of Mr. Lamont and the anomalous position of all Poor-law medical officers in Scotland, whereby such things became possible. Mr. Balfour definitely committed the Government of that day, which remains the Government of this day, to look into the whole question of the position of parochial medical officers in Scotland. A practical result followed upon this important debate, for Mr. Weir moved Parliament for a return showing the number of medical officers dismissed by parish councils in each crofting county during each year from 1895 to 1901 inclusive, name of the parish council, and the cases in which a cause of dismissal was assigned. The return was issued as follows:—

[2] Vide the *Times* Parliamentary Report, July 15th, 1899.

Return of Medical Officers Dismissed by Parish Councils since May 15th, 1895.

County and parish.	Number of medical officers dismissed.	Date.	Whether cause for dismissal was assigned.
Argyll:			
Kilfinichen	1	1897	No
Caithness:			
Halkirk	1	1896	No
Inverness:			
Ardersier	1	1902	Yes
Barra	1	1898	No
Croy	1	1902	Yes
Petty	1	1902	Yes
S. Uist	1	1898	Yes
Orkney and Shetland:			
Eday	1	1899	Yes
Evie	1	1898	No
Rousay	1	1900	No
Stronsay	1	1898	Yes
Ross-shire:			
Kincardine (parish of)	1	1896	No
Uig	1	1899	No
Sutherland:			
Durness	1	1898	No
Kildonan	1	1899	No
Loth	1	1899	No

It will be seen that in seven years—i.e., from 1896 to 1902—16 medical officers were dismissed by their parish councils, 10 of whom received no reason whatever for the termination of their engagements. Upon this return being made public a wide feeling of insecurity was felt among Scottish parochial medical officers, which was not decreased by looking closer into the facts. The return deals only with dismissals but the resignations were known to be at least as numerous. Some parish councils in Scotland were clearly unable either to appreciate the difficulties and responsibilities of medical practice or to give to gentlemen of professional standing an elementary tribute of respect. Stung by various petty annoyances and wounded by the advantage taken of their subservient position many medical officers in the Scottish Poor-law service have been compelled to resign office in the interest of their honour and of the dignity of their profession.

The composition of the parish councils is largely responsible for this unfortunate state of affairs. During the 50 years of the existence of the old parochial boards, which were composed of the most influential members of the parish, the medical officers received proper treatment: but on the passing of the Local Government Act in 1894, when the membership of the parish council was thrown open to all ratepayers, a different spirit began to prevail. The parish councils, especially in the crofting districts, are now usually composed of the parish clergy (Established and Dissenting), lay preachers, missionaries, small shopkeepers, crofters, and fishermen. These oddly comprised bodies, more than half of whom are without education—at any rate, without any education that can enable them to appreciate the methods of self-respecting and efficient medical practice, the proper rate of pay, or the proper methods of behaviour—have unlimited power over the medical officer and in many cases, it would seem, do not fail to use it. While rendering his tenure of office miserable they can, and do, dismiss him without a reason. This is an extraordinary position of affairs and one that calls for the measure of reform virtually promised some years ago by Mr. Balfour. Inspectors of the poor and other parish officials cannot be dismissed without the sanction of the Local Government Board of Scotland and the medical officers ought to enjoy the same security. They ought to be able to feel that their work and conduct will be judged by a competent and unbiased public department and not by a group of their neighbours, mostly their inferiors in station and knowledge.

Insecurity of tenure, however, is not the only drawback to

the service. In many cases, it is stated, exorbitant house rents are charged and the salary is not commensurate with any heavy expense in rent unless the private practice be lucrative. This it is not likely to be in sparsely inhabited neighbourhoods where patients live far apart and where horses have to be kept to meet their wants. Moreover, the cost of medical education has increased and the working expenses of the medical officer have become heavier of late years but the salaries given have not been raised and, while never anything but small, now bear no sort of proportion either to the medical officer's needs or to the hardships that he has to undergo. During sickness, or temporary absence from the parish for a holiday or upon private business, the medical officer has to provide a substitute who may cost him from £4 4s. to £5 5s. a week with travelling expenses and board. Other parish officials—e.g., ministers, Poor-law inspectors, and schoolmasters—can usually get a free and even an extended holiday and the same reasonable facilities for rest and recreation should be granted to the medical officers not as a favour but as part of their contract for service. We are constantly told that the extreme poverty of certain districts of Scotland forbids more generous payment to the medical officers. The proper deduction from this premiss, of course, is that the State should assist the community that cannot assist itself, but the premiss is not secure from contradiction. The financial condition of highland and island parishes has materially improved of late years, while the medical officer's position and absurdly inadequate salaries, fixed by the old parochial boards, remain what they were 20 years ago despite the increased expenses of the medical man's education and the far more costly equipment of medical practice.

The Scottish Poor-law Medical Association upon these grounds is prepared to advise medical men who are thinking of applying for parochial appointments in the highlands and islands of Scotland to communicate with the out-going medical officer on the following points:—

1. The character and general attitude of the parish council towards the medical officer.
2. The house accommodation and the rent of the house.
3. The adequacy of salary as medical officer to the paupers.
4. The arrangements for holiday and sick leave.

By ascertaining from the late appointee whether the vacancy has recurred owing to his arbitrary dismissal or to a resignation forced upon him by the arduous circumstances of the post candidates run no risk of accepting unfair terms to the damage of their own interests and of the honour of the medical profession. If the younger generation of medical men in Scotland were to follow the suggestion made to them they would find that in many instances the berths to which they aspire are badly paid, or, at any rate, that the salary is incommensurate with the expenses. The following concessions secured by legislation are necessary, in the opinion of the Scottish Poor-law Medical Officers' Association, to make the office of a Poor-law medical officer in the highlands and islands of Scotland worth retaining:—

1. The right of appeal to the Local Government Board of Scotland against unjust dismissal.
2. Free official residence.
3. Increased salary, chiefly in the form of increased fees for attendance on midwifery cases and cases of serious surgical injury, and for the certifying of lunatics.
4. Annual free holiday of reasonable length and a free substitute in case of sickness.
5. Superannuation allowances.

A departmental committee of the Local Government Board, after a close inquiry, has recommended the granting of the first two reforms, and a Bill has been drafted embodying the recommendations.

It is possible that there will be no long delay before the Bill becomes law, but until that day the association suggests that young medical men should not accept appointments in the highlands and islands of Scotland as acquiescence in the existing wrongful system assists in keeping up unjust and unsatisfactory conditions. These proposals for a boycott of the parochial medical service are drastic but it is doubtful if they would succeed. It must be difficult to secure the necessary unanimity of opinion among young medical men anxious to make a start, whose natural desire to support themselves is backed by a family circle guiltless of any professional sentiment. At the same time all must agree that medical men must be provided for the sparsely populated districts of Scotland at proper rates of remuneration and under conditions which they can accept without loss of dignity or risk of unjust treatment. It is to be hoped that Mr. Balfour's promise of reform will not be lost sight of either by the medical profession in Scotland or medical men in Parliament. State aid is required. The simplest form in which that aid could be granted would be by the erection of the Poor-law medical officers into assistant medical officers of health. To such officers, properly salaried, might be confided all the local duties of medical attendance upon infectious disease, of inspection of schools, workshops, bakehouses, and abattoirs, and they might be put in charge, under the county medical officer, of the necessary statistical returns of public health. There is no need in Scotland for a sanitary official distinct from a Poor-law officer, and the care of the sick poor could best be undertaken by those who are responsible for the sanitation of their environment—only money, not much of it, being wanted to carry out this reform.

(To be continued.)

THE EARTHQUAKE IN THE PUNJAB.

A NARRATIVE BY A MEDICAL SURVIVOR.

DHARMSALA and the Kangra Valley were visited by an exceptionally severe earthquake on April 4th. It commenced about 6.20 A.M. and appeared to travel in a direction from south east to north-west. Every house in the station was more or less affected, the majority falling in completely and instantaneously, whilst a few stood partially, and in one house (that of Captain Bateman-Champain, 1st Gurkha Rifles) the roof of one room only fell in. There was no time for escape and with the exception of a very few all who were not killed were more or less seriously injured. The killed included 30 Europeans (which represents a very large proportion, nearly 50 per cent., of our small European population). There were also killed 63 of the 1st Gurkha Rifles and 135 of the 7th Gurkha Rifles. The severely injured included nine Europeans, 28 of the 1st Gurkha Rifles, 55 of the 7th Gurkha Rifles, and three reservists. The slightly injured included 15 Europeans, 73 of the 1st Gurkha Rifles, and 117 of the 7th Gurkha Rifles. The number of deaths of natives in the district may probably be reckoned in tens of thousands. First aid to the wounded was rendered as promptly as possible by Major P. Hehir, I.M.S., with the help of two hospital assistants in the 7th Gurkha Rifles; and by Major H. M. Earle, I.M.S., with the help of one hospital assistant in the 2nd Battalion of the 1st Gurkha Rifles. Major Hehir fortunately escaped without being injured and Major Earle with comparatively slight injuries, otherwise it is awful to contemplate the horrors that would have been added. Luckily, also, the surgical appliances, &c., had mostly escaped much damage. The work of rendering first aid was commenced at the time of the disaster and was completed at 11 P.M. the same night. The element of shock naturally entered very largely into the cases. The majority of the wounded are progressing very favourably.

The following is a list of the chief cases of injury: one British officer sustained fracture of the internal table of the skull and compression of the brain; one British officer sustained injury of the pericardium and scalp wound; three British officers suffered from fairly severe scalp wounds and general contusions; and two ladies sustained simple fractures of the thigh. All the above are doing well. One Gurkha officer suffered from crushing of the breast and lungs, laceration of both ears, five extensive scalp wounds, concussion of the brain, and comminuted fracture of the clavicle; he is, however, doing well. Six Gurkha officers sustained various injuries, including broken ribs, scalp wounds, and extensive contusions. All are doing well.

Injuries of the following varieties were noted among the rank and file: a case of compound comminuted fracture of the thigh for which amputation was performed (the patient died); a case of fracture-dislocation of the spine and fracture of the pelvis with rupture of the bladder; a case of fracture-dislocation of the spine (this patient has now developed pulmonary tuberculosis); a case of fracture-dislocation of the spine without further complications (this patient is doing fairly well); a case of extensive destructive crushing and laceration of the front of both legs, exposing several inches of the tibiæ (this patient developed tetanus);

a case of compound comminuted fracture of the right leg tearing the anterior tibial artery and nerve (this patient also developed tetanus); five cases of fracture of the base of the skull (of these patients one died, two are doing well, and two are left with several cranial nerves paralysed); a case of uncomplicated fracture of the pelvis (this patient is doing well); a case of fracture of the pelvis with rupture of the bladder (this patient is doing fairly well); nine cases of fracture of the ribs (in one of these there was much subcutaneous emphysema and the patient died; in another there was subcutaneous emphysema and pneumonia occurred as a complication but the patient is doing as well as can be expected; two others were also complicated by wounds of the lungs); two cases of dislocation of the spine, both of which were reduced and the patients are doing well; a case of dislocation of the hip-joint which was reduced and the patient is doing well; two cases of simple comminuted fracture of the thigh; five cases of simple fracture of the thigh; six cases of compound fracture of the leg; a case of compound comminuted fracture of the humerus, the ends of which were wired and the patient is doing well; two cases of simple fracture of the arm; five cases of simple fracture of the clavicle; two cases of simple fracture of the forearm; a very extensive and severe scalp wound; two cases of injury of the pericardium with hæmo-pericardium; a case of injury of the pericardium and heart; and five cases of injury of the kidneys (three of these patients died).

As regards the cases that developed tetanus the symptoms commenced on the ninth day after the earthquake. Anti-tetanic serum was administered on the tenth day in curative doses but had no effect. All the other patients suffering from compound fractures and crushing wounds have been given prophylactic doses of antitetanic serum and so far have shown no symptoms of tetanus. The complicated case of fracture of the pelvis is interesting in that after laparotomy about a cubic inch of the left side of the arch of the pubis was found separated and penetrating the bladder.

Most of the fractured thighs have been treated by simple horizontal extension and most of the compound fractures are doing well under conservative treatment. In some of the cases of injured kidney urine was voided highly mixed with blood and in others there was almost complete suppression of urine. One patient developed uræmia and was treated by diaphoresis and saline injections but finally succumbed. The cases of fracture-dislocation of the spine were swung and reduced as far as possible and then put up in plaster of Paris.

Mr. W. Watson Cheyne's view, that "shock is due to a state of exhaustion of the medulla and spinal cord, tending to a great reduction in the vital activity generally, and resulting from severe injury of the peripheral ends of the sensory and sympathetic nerves," appears to receive valuable confirmation from the cases of wounded in the earthquake, though vaso-motor paralysis, no doubt, was also present in many cases.

There are now five medical officers working on the military side of the station—namely, Major Hehir, Major Earle, Captain H. E. M. Douglas, V.C., R.A.M.C., Lieutenant G. H. Whale, I.M.S., and Lieutenant A. F. Pilkington, I.M.S. Colonel D. O'Sullivan, R.A.M.C., also lent valuable aid for some days. Four medical officers are working on the civil side—namely, Major Lane, Major S. Browning Smith, Major G. MacIver C. Smith, and Captain W. E. McKechnie, all of the Indian Medical Service, with the aid of assistant surgeons and hospital assistants.

The Gurkhas, both officers and men, worked splendidly in extricating the wounded and dead. There were several very hard cases of people who were on the point of leaving the place losing their loved ones, whilst others were fortunate in having just left. Several people who had most, and perhaps all, of their money invested in house property are reduced to indigent circumstances and I believe that only one tea factory is left standing in the district. Provisions were very short at first but supplies were quickly sent up by the civil and military authorities, as was also medical aid. Pioneers and sappers and miners have been, and are, doing yeoman service in extricating bodies of men and animals and private property from the mines and in repairing roads, bridges, &c.

Cases of extraordinary vitality were observed, some persons having been dug out alive after three and four days and one man after five days. A dog was unearthed alive after having been buried for 11 days. All are in tents. Fortunately, the weather has been fine with the exception of one or two severe thunderstorms. Minor shocks of earthquake occurred at frequent intervals during the night following the disaster and subsequently the intervals gradually increased. Now we only get one a day. Geologists state that the Himalayas are of comparatively recent formation and that there is no reason to doubt that the forces which brought their folds into existence are yet in action. It seems a reasonable theory that somewhere under the Kangra valley and Dharmsala there occurred a caving-in of some ill-supported portion of the earth's crust and possibly the proximity of Dharmsala to the high ranges may have had something to do with the severity of the shock. However this may be, it becomes an important question, and a very enervating one to those residing there, whether further earthquakes will occur in other hill stations in the Himalayas. The obvious indication seems to be that buildings should be constructed of lighter material than they are at present and that no double-storeyed houses should be built.

Dharmsala, April 19th.

THE GERMAN CONGRESS OF INTERNAL MEDICINE.[1]

(*Concluded from p. 1222.*)

Therapeutic Applications of the Roentgen Rays.

DR. HOFFMANN (Düsseldorf) discussed the Treatment of Leukæmia and Pseudo-leukæmia by the Roentgen Rays. He said that the patient's general health improved, the number of leucocytes decreased, and the spleen became smaller. In one case the skin became gangrenous three months after exposure to the rays. It was remarkable that the patients continued to improve even after the termination of the treatment.

Dr. KRAUSE (Breslau) said that he had treated six cases of myelogenic and two cases of lymphatic leukæmia with the rays during several months. He confirmed the favourable results obtained by Dr. Hoffmann and drew attention to the fact that the discharge of uric acid was very much increased by the treatment. In lymphatic leukæmia his results were not so good as in the myelogenic form. In one case of pseudo-leukæmia Dr. Krause obtained a favourable result; in another case there was no improvement.

Dr. LINSER and Dr. HELBER (Tübingen) communicated a paper on the Influence of the Roentgen Rays on the Blood. By experiments made on animals they ascertained that under the influence of these rays the leucocytes decreased and might even almost disappear from the circulation. They were of opinion that the rays destroyed the leucocytes in the circulating blood. They had been led to this opinion by the fact that after the leucocytes had totally disappeared from the circulation they were nevertheless still present within the spleen and the marrow of the bones. The same result was obtained whatever part of the body was exposed to the rays, and even outside the body the action of the x rays on the leucocytes might be observed in fresh or stained microscopical preparations. The destruction of the leucocytes by the x rays produced toxic substances in the blood serum—the so-called leucotoxins. This leucotoxic serum when injected into animals also destroyed the leucocytes, whilst the injection of normal serum made them increase. The degree of efficacy of the "Roentgen serum" depended on the number of leucocytes destroyed and was therefore produced by their destruction. At temperatures of 55° or 60° C. the serum became inactive. Probably the presence of nephritis in animals exposed to the rays was also caused by the leucotoxic substances. Some degree of immunity was established in the animals exposed to the rays, as after the first decrease of the leucocytes, they again spontaneously increased although the irradiation was maintained. Radium and ultra-violet rays had no destructive action on the leucocytes similar to that which was possessed by the Roentgen rays. The Roentgen rays, moreover, did not affect the red corpuscles

In the discussion some of the speakers deprecated the formation of exaggerated hopes as to the radiotherapy of leukæmia; the overwhelming majority, however, were of opinion that the Roentgen-therapy had a curative effect on

[1] For this report we wish to tender our sincere thanks to the editor of the *Deutsche Medicinische Wochenschrift*, through whose courtesy it has been forwarded to us by our Berlin correspondent.

the disease in a great many cases and in this respect exceeded all the other therapeutic methods. Success was not, however, invariably obtained because certain forms of the disease were resistant to the action of the rays.

Radio-activity of Mineral Waters.

Dr. BERGELL and Dr. BICKEL (Berlin) communicated a paper in which they described their researches on the Radio-activity of Mineral Waters. The mineral waters when freshly collected from the spring showed an emanation of radium, which, however, disappeared within a short time. Exported mineral waters were, therefore, free from radium, but it was possible to make them radio-active again by means of a solution of radium salts. Dr. Bergell and Dr. Bickel made their experiments with Kochbrunnen, a spring at Wiesbaden, the water of which contains chloride of sodium. This water when deprived of the emanation of radium retarded the digestion of albuminates, but after artificial restoration of the radio-activity it promoted digestion.

Dr. BRAUNSTEIN (Moscow) reported that by injection of radio-active water malignant growths were made to disappear, a fact which might be of the greatest importance in the treatment of cancer. The injection of radio-active water was preferable to irradiation because the deeper layers of the tissue might in this way become influenced or the radium might be applied to growths which were not reached by the rays. Apart from the destructive action of radium on the tissues its bacteriological action was of great importance, and its favourable influence on certain fermentative processes might possibly be used in the treatment of diseases of the gastro-intestinal canal.

The Secretion of Mucus in the Intestines.

Dr. SCHÜTZ (Wiesbaden) said that the mucous discharge in the intestines differed very much in pathological conditions but that it was impossible to conclude from its quantity whether the condition was of nervous or of catarrhal origin. A nervous origin of a secretion of mucus was very rare; as a rule mixed forms occurred together. The quantity of epithelial cells in the mucus was proportional to the quantity of the latter.

In the discussion Dr. SCHLESINGER (Vienna) stated that in mixed forms of membranous enteritis and catarrhal colitis the mucous discharge sometimes contained a great quantity of leucocytes, sometimes only epithelium of the intestine without leucocytes.

Dr. BICKEL said that the mucous discharge was not produced by a mere nervous irritation of the mucous glands; like Professor Pawlow, he was of opinion that the mucous secretion was a prophylactic measure of the organism to remove injurious substances. He had found that when an injurious agent produced an abnormal discharge of mucus in the stomach it did not extend over the whole surface of the mucosa but was confined to the area affected by the agent in question. Electrical irritation of the mucosa of the stomach produced a discharge of mucus but not of the specific gastric juice.

Sleeping Sickness.

Dr. ALBERT LORAND (Carlsbad) read a paper which he described as a contribution to the Pathology of African Sleeping Sickness. He said that the features of the disease resembled those of myxœdema not only in respect of most of the clinical symptoms, including the apathy and somnolence, but also in the anatomico-pathological appearances, especially those observed in the central nervous system. As often happened with myxœdema, sleeping sickness was preceded by an infectious disease. In the case of sleeping sickness this infectious disease was trypanosomiasis, which presented most of the typical symptoms of hyper-activity of the thyroid gland—namely, hyperthermia, tachycardia, perspiration, diarrhœa, insomnia, and pruritus. In hyperthyroidia there was insomnia but in athyroidia (myxœdema) there was somnolence. It was well known that in most of the infectious diseases the thyroid gland was liable to undergo pathological changes which might be followed by degeneration. Dr. Lorand had an opportunity of observing the disease in a white officer who had returned to Europe from the Congo and in whose cerebro spinal fluid trypanosomata were found. In this case good results were obtained by the use of thyroid tablets, especially in the symptoms referred to the nervous system.

Among the many other subjects brought before the congress mention may be made of papers on the Circulation in Anæmic Patients, by Dr. MOHR (Berlin); on Nervous Tachypnœa, by Dr. HOFBAUER (Vienna); and on the Centrifugal Current in Sensory Nerves, by Dr. KOHNSTAMM (Munich).

THE DINNER OF THE LONDON SCHOOL OF TROPICAL MEDICINE.

A BANQUET was held on May 10th, with the object of liquidating a large debt which the London School of Tropical Medicine has unavoidably contracted. The gathering proved in every way a success. The chair was occupied by the man to whose foresight, inspired mainly by Sir Patrick Manson, the inception of the school is due—namely, the Right Honourable Joseph Chamberlain, formerly Colonial Secretary. The school was founded in the year 1899, its primary object being to afford instruction in tropical medicine to medical officers of the Colonial Service, and the committee of management of the Seamen's Hospital Society was invited to establish the school in connexion with its hospitals. The committee at once fell in with the suggestion but instead of the facilities for training being confined to those who had entered, or were about to enter, the Colonial Medical Service the school was thrown open to all medical practitioners who wished to obtain training in the subject of tropical diseases. The institution flourished from its commencement, but, with that kind of *τύχη ἀτυχής* which so often attends success, so many students sought admission that the laboratory originally built did not suffice and a large addition was rendered necessary. The expenses thus incurred laid a debt of £6000 on the school authorities, thus commencing the burden which it was the object of the banquet to relieve.

A representative company assembled, including Mr. Alfred Lyttelton, the Secretary of State for the Colonies, the Duke of Marlborough, Under-Secretary of State for the Colonies, Lord Rothschild, Sir Richard Douglas Powell, President of the Royal College of Physicians of London, Sir Patrick Manson, medical adviser to the Colonial Office, Sir William Church, Sir John Glover, chairman of Lloyd's, Mr. Jonathan Hutchinson, Mr. Watson Cheyne, Professor Howard Marsh, Major Ronald Ross, Professor W. J. R. Simpson, and Professor Augustus Waller.

After the usual loyal toasts, Mr. CHAMBERLAIN proposed "The London School of Tropical Medicine" and said that when he was invited to preside at this dinner he could not resist the temptation to repeat the experience of six years ago when he presided at a similar banquet at the establishment of the London School of Tropical Medicine. Now he came back to rejoice in their past success and to inquire into their future, his interest in tropical medicine being unexhausted and unbounded. He regarded it as a privilege as well as a duty to be in any way associated with the school, a privilege because he could not think of any subject of scientific research and philanthropic enterprise which was more interesting, while it was a duty which we owed to the empire and from which we could not divest ourselves whatever our political opinions might be to see that all our possessions were rendered as healthy as possible. This duty had increased in recent years with the extension of our territory, with the increase of scientific knowledge, and with the awakening of our imperial conscience. We owed this duty to the vast population for which we had made ourselves responsible and owed it also to those of our own race who were daily risking health and life in order to uphold the honour and the interests of this country. Where the British flag was planted there must be established the British prosperity; we were unable, therefore, to stay where we began. Let them compare the position of Egypt as it was a quarter of a century ago with the Egypt of Lord Cromer and note the perhaps even more extraordinary advance in the condition of the Soudan and Nigeria. These miracles had been wrought by a handful of men, mostly very young, brought suddenly into the presence of great responsibilities, having to deal with crises of administration, of disease, of savage aggression, and with every problem of statesmanship. Science had given its martyrs recently in the persons of Myers and of Dutton, and owing to our ignorance of the conditions which had to be faced or our inability to deal with them many others had left their health or their lives behind them in tropical climes. Our first duty was to do all in our power to reduce to the uttermost this blood tribute which we paid to the empire. To Sir Patrick Manson we owed the idea of a London tropical school and almost abreast of

him came the promoters of the Liverpool School of Tropical Medicine. They in London felt no jealousy of the Liverpool school since there was room for all in that work, but they did envy them the liberality and energy of their citizens, who raised something like £40,000 by private subscription. Why could not London, the metropolis of the empire, the metropolis of the world of commerce, emulate more frequently the generosity of a provincial city? Mr. Chamberlain then referred to the work done by the London school and to the number of its students and appealed for the sum of £100,000 to repay the debt, to make proper provision for the teaching, and, above all, to subsidise research in tropical diseases of every kind.

Sir PATRICK MANSON having replied to the toast, the COLONIAL SECRETARY proposed "The Empire" in an excellent speech. Mr. Lyttelton's words were eloquent and lofty and showed him to be inspired by a very true and far-reaching patriotism, though, as was natural, much of what he said centred round the work of the chairman, his predecessor in office.

Lord STRATHCONA was the representative public man selected to reply to the toast of "The Empire."

The Duke of MARLBOROUGH then gave "The Health of the Chairman," to which Mr. CHAMBERLAIN replied.

Subscriptions and donations amounting to over £10,000 were received during the evening.

Looking Back.

FROM

THE LANCET, *SATURDAY*, May 12, 1827.

Every variety of nervous affection does occur without any organic disease. But when people have epilepsy without organic disease they generally recover, or may recover. If the irritation which occasioned the epilepsy continues for a length of time, naturally enough, faulty vascular actions will be induced, so that in people who have been long subject to epileptic fits you generally find tubercles. But the subject is a most momentous and important one, and very much deserving of your attention. For my own part, I shall affirm that every kind of nervous malady may occur in the brain, as *functional* disorder, and not as *organic* disease. This is most important, because it leads to the consideration of *madness;* and why should they bleed and purge, and the devil knows what, poor people who are afflicted with madness, as if they have all a disease of the organ, the brain itself? Now here I quote Morgagni; he has got a long list of diseases that he has published where tubercles were found, and among that list are cases of persons who were mad from too hard a brain, from too soft a brain, from a fungus in the brain, from a plexus occurring in the brain, and so on; but here comes the epigram, the concluding sentence, "but all these morbid appearances have I seen without any appearance of tubercles at all, and I have seen tubercles where there have been no such morbid appearances." There's a body of evidence for you. (Much laughter.) Madness is no cause of these tubercles at all. I say the object we should bind our attention to is, to settle nervous inquietude; to tranquilise the vital actions of the cerebrum; to cut off any cause of irritation affecting it; and I take the putting into order the *digestive organs* to be one grand point towards accomplishing this end. (Laughter.) I tell you honestly what I think is the cause of the complicated maladies of the human race; it is their gormandizing and stuffing, and stimulating those organs to an excess, thereby producing nervous disorder and irritation. The state of their minds is another grand cause: the fidgetting and discontenting yourselves about that which can't be helped; passions of all kinds—malignant passions, and worldly cares, pressing upon the mind, disturb the cerebral action, and do a great deal of harm. There is something of moral treatment in madness: you are to quiet the mind as well as the alimentary organs, and not to keep bleeding and blistering, as if you were to cure all the diseased structure by such measures. Of course, preventing too powerful an impulse of the blood is important, but everything is to be conducted in moderation.[1]

[1] Excerpt from "Mr. Abernethy's Physiological, Pathological, and Surgical Observations; delivered in the Anatomical Course of Lectures, at St. Bartholomew's Hospital."

ROYAL COLLEGE OF PHYSICIANS OF EDINBURGH.

A QUARTERLY meeting of this College was held on May 2nd, Dr. J. PLAYFAIR, the President, being in the chair.

The PRESIDENT made feeling reference to the loss which the College had sustained by the death of Sir John Sibbald.

On a ballot the following candidates were admitted to the Membership of the College after examination: Hugh Jamieson, M.B., C.M., Edinburgh; Leo Ferdinando Bianchi, L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., Edinburgh; Patrick Stevenson Haldane, M.B., Ch.B., Bridge of Allan; and Jamshijd Dadabhai Munsiff, L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., Edinburgh.

The REGISTRAR reported that since the last quarterly meeting 38 persons had obtained the Licence of the College by examination.

The CURATOR submitted his report for the last year regarding the research and reporting work undertaken in the laboratory during the year and the expenditure incurred. The report showed that 34 workers had been engaged in research, that 2426 specimens had been reported on, being an increase of 61 on the number for the previous year; and that the expenditure had amounted to £1086 12*s.* 4*d.* The report was adopted by the College.

The Parkin prize, which is in the gift of the College, was awarded after competition to Dr. Charles Porter. The subject of the essay on the present occasion was, in terms of the deed of bequest, "On the Curative Effects of Carbonic Acid Gas or Other Forms of Carbon in Cholera, for Different Forms of Fever and other Diseases."

The TREASURER reported that the council had resolved to offer the Parkin prize for competition for the ensuing year, the subject to be, in terms of the bequest, "On the Effects of Volcanic Action in the Production of Epidemic Diseases in the Animal and in the Vegetable Creation and in the Production of Hurricanes and Abnormal Atmospherical Vicissitudes"; essays to be received by the secretary up to Dec. 31st, 1906.

Dr. Norman Walker was elected as representative of the College on the conjoint committee of management of the triple qualification.

It was intimated that Dr. W. Ford Robertson had been appointed Morison lecturer for the ensuing session.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN 76 of the largest English towns 9533 births and 4621 deaths were registered during the week ending May 6th. The annual rate of mortality in these towns, which had been 16·6, 15·6, and 16·5 per 1000 in the three preceding weeks, declined again to 15·4 per 1000 last week. In London the death-rate was 14·5 per 1000, while it averaged 15·8 per 1000 in the 75 other large towns. The lowest death-rates in these towns were 6·0 in Burton-on-Trent, 6·2 in Hornsey, 8·4 in Handsworth (Staffs.), 9·6 in Leyton, in Aston Manor, and in Rotherham, and 9·9 in Grimsby; the highest rates were 21·3 in Rhondda, 21·8 in Sunderland, 22·4 in Bootle, 24·0 in Merthyr Tydfil, 24·2 in Smethwick, 24·9 in Middlesbrough, and 26·8 in Oldham. The 4621 deaths in these towns last week included 469 which were referred to the principal infectious diseases, against 553, 453, and 460 in the three preceding weeks; of these 469 deaths, 186 resulted from measles, 132 from whooping-cough, 47 from diphtheria, 47 from diarrhœa, 29 from scarlet fever, 24 from "fever" (principally enteric), and four from small-pox. In Hornsey, Wolverhampton, Walsall, Leicester, Huddersfield, Hull, Swansea, and five other smaller towns no death from any of the principal infectious diseases was registered last week; while the highest death-rates from these diseases were recorded in Hanley, West Bromwich, Smethwick, Coventry, Oldham, Sheffield, and Merthyr Tydfil. The greatest proportional mortality from measles occurred in West Bromwich, Smethwick, Coventry, Warrington, Oldham, Sheffield, and Merthyr Tydfil; from scarlet fever in Wigan, Burnley, and Blackburn; from diphtheria in East Ham; and from whooping-cough in West Ham, Leyton, Hanley, Smethwick, Preston,

Halifax, and South Shields. The mortality from "fever" and from diarrhœa showed no marked excess in any of the large towns. Of the four fatal cases of small-pox registered last week one belonged to London, one to Nottingham, one to Oldham, and one to Bradford. The number of small-pox patients remaining under treatment in the Metropolitan Asylums Hospitals, which had been 15, 17, and 16 at the end of the three preceding weeks, had risen again to 17 at the end of last week; four new cases were admitted during the week against none, six, and four in the three preceding weeks. The number of scarlet fever cases in these hospitals and in the London Fever Hospital at the end of the week was 2152, against 2133, 2128, and 2182 at the end of the three preceding weeks; 235 new cases were admitted during the week, against 290, 253, and 255 in the three preceding weeks. The deaths in London referred to pneumonia and diseases of the respiratory organs, which had been 304, 272, and 306 in the three preceding weeks, declined to 256 last week, but were 63 above the number in the corresponding period of last year. The causes of 48, or 1·0 per cent., of the deaths in the 76 towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in West Ham, Portsmouth, Bristol, Nottingham, Salford, Leeds, Hull, Newcastle-on-Tyne, and in 51 other smaller towns; the largest proportions of uncertified deaths were registered in Hanley, Leicester, Liverpool, Bootle, Blackburn, and Bradford.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in eight of the principal Scotch towns, which had been 18·0, 17·8, and 18·8 per 1000 in the three preceding weeks, declined again to 18·0 per 1000 during the week ending May 6th, but was 2·6 per 1000 in excess of the mean rate during the same period in the 76 large English towns. The rates in the eight Scotch towns ranged from 13·4 in Leith and 15·8 in Paisley to 18·9 in Glasgow and 21·3 in Perth. The 603 deaths registered in these eight towns last week included 26 which were referred to whooping-cough, 16 to measles, 15 to diarrhœa, four to diphtheria, three to scarlet fever, and three to "fever." In all, 67 deaths resulted from these principal infectious diseases last week, against 69, 69, and 59 in the three preceding weeks. These 67 deaths were equal to an annual rate of 2·0 per 1000, which was 0·4 per 1000 above the mean rate last week from the same diseases in the 76 large English towns. The fatal cases of whooping-cough, which had been 36, 23, and 27 in the three preceding weeks, declined last week to 26, of which 16 were registered in Glasgow, three in Dundee, two in Edinburgh, two in Aberdeen, and two in Paisley. The deaths from measles, which had been 17, 23, and 21 in the three preceding weeks, rose to 26 last week, and included 16 in Glasgow, three in Dundee, two in Edinburgh, two in Aberdeen, and two in Paisley. The fatal cases of diarrhœa, which had been nine, 12, and eight in the three preceding weeks, rose again last week to 15, of which five occurred in Glasgow, three in Dundee, three in Leith, and two in Aberdeen. The deaths from diphtheria, which had been six, six, and one in the three preceding weeks, increased again to four last week, and included two in Glasgow. The three fatal cases of "fever," including one of typhus, were all registered in Glasgow. The deaths referred to diseases of the respiratory organs in these towns, which had been 121, 126, and 121 in the three preceding weeks, rose again to 132 last week, and were 32 in excess of the number in the corresponding period of last year. The causes of 22, or nearly 4 per cent., of the deaths registered in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 21·6, 23·4, and 21·9 per 1000 in the three preceding weeks, rose to 22·0 per 1000 during the week ending May 6th. During the past four weeks the death-rate has averaged 22·2 per 1000, the rates during the same period being 15·4 in London and 17·1 in Edinburgh. The 160 deaths of persons belonging to Dublin was one in excess of the number in the preceding week and included eight which were referred to the principal infectious diseases, against eight, 12, and eight in the three preceding weeks; of these, three resulted from measles, three from "fever," one from whooping-cough, and one from diarrhœa, but not any from small-pox, scarlet fever, or diphtheria. These eight deaths were equal to an annual rate of 1·1 per 1000, the death-rates last week from the principal infectious diseases being 1·5 in London and 0·9 in Edinburgh. The fatal cases of measles, which had been four, four, and two in the three preceding weeks, rose last week to three. The three deaths from "fever" were slightly above the number in the preceding week. The 160 deaths in Dublin last week included 28 of children under one year of age and 44 of persons aged 60 years and upwards; the deaths of infants were slightly in excess of the number in the preceding week, while those of elderly persons showed a decline. Two inquest cases and two deaths from violence were registered; and 61, or nearly 40 per cent., of the deaths occurred in public institutions. The causes of seven, or more than 4 per cent., of the deaths registered in Dublin last week were not certified.

VITAL STATISTICS OF LONDON DURING APRIL, 1905.

IN the accompanying table will be found summarised complete statistics relating to sickness and mortality in the City of London and in each of the metropolitan boroughs. With regard to the notified cases of infectious diseases it appears that the number of persons reported to be suffering from one or other of the nine diseases specified in the table was equal to an annual rate of 5·6 per 1000 of the population, estimated at 4,684,794 persons in the middle of the year. In the three preceding months the rates had been 5·8, 5·9, and 6·0 per 1000 respectively. The lowest rates last quarter were recorded in Kensington, City of Westminster, Islington, the City of London, Southwark, and Battersea; while the highest rates occurred in Bethnal Green, Stepney, Poplar, Wandsworth, Lewisham, and Woolwich. Small-pox was rather less prevalent than it had been during the preceding month; the 15 cases notified during April included six in Lewisham, two in Paddington, and two in Woolwich. The Metropolitan Asylums hospitals contained 16 small-pox patients at the end of last month, against 15, 15, and 20 at the end of the three preceding months; the weekly admissions averaged four, against one, three, and four in the three preceding months. The prevalence of scarlet fever during the month under notice showed a very slight decline from that recorded in the preceding month; among the various metropolitan boroughs this disease was proportionally most prevalent in Hackney, Stepney, Wandsworth, Camberwell, Deptford, Lewisham, and Woolwich. The number of scarlet fever patients in the Metropolitan Asylums hospitals, which had been 2067, 1941, and 1997 at the end of the three preceding months, had further risen to 2152 at the end of last month; the weekly admissions averaged 266, against 209, 231, and 272 in the three preceding months. The prevalence of diphtheria showed a considerable decrease compared with that in the preceding month; the greatest proportional prevalence of this disease occurred in Hammersmith, Fulham, Shoreditch, Bethnal Green, Stepney, Poplar, and Woolwich. The Metropolitan Asylums hospitals contained 719 diphtheria patients at the end of last month, against 836, 837, and 788 at the end of the three preceding months; the weekly admissions averaged 83, against 115, 118, and 98 in the three preceding months. Enteric fever was slightly less prevalent than it had been in the preceding month; among the various metropolitan boroughs this disease was proportionally most prevalent in Fulham, Chelsea, Holborn, Poplar, Southwark, Deptford, and Woolwich. The number of enteric fever patients remaining under treatment in the Metropolitan Asylums hospitals at the end of last month was 65, against 134, 105, and 68 at the end of the three preceding months; the weekly admissions averaged 11, against 17, 13, and 11 in the three preceding months. Erysipelas was proportionally most prevalent in Hackney, Shoreditch, Bethnal Green, Stepney, and Poplar. The 19 cases of puerperal fever notified during the month included three in Lewisham and two each in Islington, Hackney, and Wandsworth.

The mortality statistics in the table relate to the deaths of persons actually belonging to the various metropolitan boroughs, the deaths occurring in public institutions having been distributed among the boroughs in which the deceased persons had previously resided. During the four weeks ending April 29th the deaths of 5422 persons belonging to London were registered, equal to an annual rate of 15·1 per 1000; in the three preceding months the rates had been 17·0, 16·4, and 15·5 per 1000. The rates

ANALYSIS OF SICKNESS AND MORTALITY STATISTICS IN LONDON DURING APRIL, 1905

(Specially compiled for THE LANCET.)

CITIES AND BOROUGHS.	Estimated population in the middle of 1905.	NOTIFIED CASES OF INFECTIOUS DISEASE.											DEATHS FROM PRINCIPAL INFECTIOUS DISEASES.													
		Small-pox.	Scarlet fever.	Diphtheria.*	Typhus fever.	Enteric fever.	Other continued fevers.	Puerperal fever.	Erysipelas.	Cholera.	Total.	Annual rate per 1000 persons living.	Small-pox.	Measles.	Scarlet fever.	Diphtheria.*	Whooping-cough.	Typhus fever.	Enteric fever.	Other continued fevers.	Diarrhœa.	Total.	Annual rate per 1000 persons living.	Deaths from all causes.	Death-rate per 1000 living.	Deaths of infants under one year to 1000 births.
LONDON	**4,694,794**	**15**	**1187**	**427**	**1**	**84**	**2**	**19**	**282**	**—**	**2017**	**5·6**	**2**	**166**	**45**	**45**	**192**	**—**	**18**	**—**	**46**	**516**	**1·4**	**5422**	**15·1**	**115**
West Districts.																										
Paddington	147,935	2	23	10	—	—	—	—	9	—	47	4·1	—	8	1	—	8	—	2	—	1	20	1·8	162	14·3	126
Kensington	180,083	—	18	5	—	5	—	1	4	—	33	2·4	—	3	2	2	9	—	—	—	2	18	1·3	216	15·6	145
Hammersmith	119,037	—	34	16	—	—	—	1	7	—	58	6·4	—	1	1	1	13	—	—	—	1	17	1·9	129	14·1	143
Fulham	157,210	—	31	20	—	6	—	1	11	—	69	5·7	—	9	1	—	13	—	1	—	2	26	2·2	190	15·8	127
Chelsea	74,496	—	18	5	—	3	—	—	4	—	30	5·2	—	—	—	2	2	—	1	—	—	5	0·9	89	15·6	87
City of Westminster	175,006	1	18	12	—	1	—	—	5	—	37	2·7	—	—	2	—	5	—	1	—	1	9	0·7	163	12·1	100
North Districts.																										
St. Marylebone	129,453	—	30	13	—	1	—	—	9	—	53	5·3	—	5	3	—	4	—	1	—	2	15	1·5	155	15·6	73
Hampstead	88,142	—	20	6	—	1	1	—	2	—	30	4·4	—	—	—	1	4	—	2	—	—	7	1·0	70	10·4	66
St. Pancras	236,183	—	40	25	—	1	—	—	8	—	74	4·1	—	10	2	4	6	—	—	—	1	23	1·3	282	14·5	128
Islington	342,994	—	48	19	—	6	—	2	12	—	87	3·3	—	9	2	2	14	—	—	—	2	29	1·1	379	14·4	95
Stoke Newington	52,828	—	17	6	—	—	—	—	1	—	24	5·9	—	3	—	—	—	—	—	—	—	3	0·7	46	11·3	83
Hackney	228,479	—	79	23	—	7	—	2	20	—	131	7·5	1	10	2	1	12	—	2	—	3	31	1·8	235	13·4	88
Central Districts.																										
Holborn	56,481	1	15	1	—	2	—	—	1	—	20	4·6	—	1	1	—	2	—	—	—	—	4	0·9	63	14·5	81
Finsbury	98,207	—	15	10	—	—	—	1	4	—	30	4·0	—	8	1	2	1	—	—	—	1	13	1·7	148	19·6	125
City of London	22,425	—	4	—	—	1	—	—	1	—	6	3·5	—	—	—	—	—	—	—	—	1	1	0·6	36	20·9	34
East Districts.																										
Shoreditch	116,565	—	31	16	—	2	—	—	11	—	60	6·7	—	11	2	3	19	—	—	—	2	37	4·1	194	21·7	166
Bethnal Green	130,401	—	39	22	—	1	—	—	16	—	78	7·8	—	7	2	4	6	—	—	—	—	19	1·9	196	19·6	135
Stepney	305,466	1	103	41	1	6	—	1	29	—	182	7·8	—	17	4		15	—	—	—	3	46	2·0	410	17·5	147
Poplar	170,280	—	51	37	—	6	—	1	20	—	115	8·8	—	15	4	2	4	—	2	—	8	35	2·7	243	18·6	153
South Districts.																										
Southwark	208,522	—	20	18	—	7	—	—	14	—	59	3·7	—	2	1	2	13	—	1	—	3	22	1·4	273	17·1	112
Bermondsey	129,006	—	27	5	—	2	—	—	10	—	44	4·4	—	9	1	1	2	—	—	—	1	14	1·4	177	17·9	129
Lambeth	313,045	—	66	17	—	5	—	1	16	—	105	4·4	—	3	—	1	10	—	—	—	3	17	0·7	354	14·7	105
Battersea	177,532	—	32	12	—	1	—	—	6	—	51	3·7	—	21	1	1	4	—	—	—	—	27	2·0	194	14·2	102
Wandsworth	265,392	—	124	16	—	4	1	2	20	—	167	8·2	—	1	5	1	14	—	1	—	3	25	1·2	245	12·0	94
Camberwell	271,240	—	110	11	—	1	—	1	20	—	143	6·9	—	9	4	1	9	—	1	—	4	28	1·3	286	13·7	114
Deptford	114,495	—	38	11	—	5	—	—	7	—	61	6·9	—	—	—		1	—	1	—	1	3	0·3	120	14·8	144
Greenwich	103,493	1	32	9	—	—	—	1	3	—	46	5·8	—	1	1	3	—	—	—	—	1	6	0·8	90	11·3	109
Lewisham	144,420	6	59	11	—	4	—	3	8	—	91	8·2	1	3	—	1	1	—	2	—	—	8	0·7	142	12·8	98
Woolwich	125,372	2	42	30	—	6	—	1	4	—	85	8·8	—	—	2		1	—	—	—	2	8	0·8	145	15·1	81
Port of London	—	1	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

* Including membranous croup

last month ranged from 10·4 in Hampstead, 11·3 in Stoke Newington and in Greenwich, 12·0 in Wandsworth, 12·1 in the City of Westminster, and 12·8 in Lewisham, to 17·9 in Bermondsey, 18·6 in Poplar, 19·6 in Finsbury and in Bethnal Green, 20·9 in the City of London, and 21·7 in Shoreditch. The 5422 deaths from all causes in London last month included 516 which were referred to the principal infectious diseases; of these, two resulted from small-pox, 166 from measles, 45 from scarlet fever, 45 from diphtheria, 192 from whooping-cough, 18 from enteric fever, and 48 from diarrhœa. The lowest death-rates from these diseases were recorded in the City of Westminster, Stoke Newington, the City of London, Lambeth, Deptford, and Lewisham; and the highest rates in Fulham, Shoreditch, Stepney, Poplar, and Battersea. Of the two fatal cases of small-pox one belonged to Hackney and one to Lewisham. The 166 deaths from measles were 110 fewer than the corrected average number; among the various metropolitan boroughs this disease was proportionally most fatal in Fulham, Stoke Newington, Finsbury, Shoreditch, Poplar, Bermondsey, and Battersea. The 45 deaths from scarlet fever were six in excess of the average number in the corresponding periods of the ten preceding years; the greatest proportional mortality from this disease occurred in St. Marylebone, Holborn, Shoreditch, Poplar, Wandsworth, and Woolwich. The 45 fatal cases of diphtheria showed a decline of 62 from the corrected average; among the various metropolitan boroughs diphtheria was proportionally most fatal in St. Pancras, Finsbury, Shoreditch, Bethnal Green, Stepney, Greenwich, and Woolwich. The 192 fatal cases of whooping-cough were 45 below the average number in the corresponding periods of the ten preceding years; this disease showed the greatest proportional mortality in Paddington, Hammersmith, Fulham, Hackney, Shoreditch, Stepney, Southwark, and Wandsworth. The 18 deaths from "fever" were seven fewer than the average, and included two in Paddington, two in Hampstead, two in Hackney, two in Poplar, and two in Lewisham. The 48 fatal cases of diarrhœa showed a slight decline from the corrected average number; among the various metropolitan boroughs the highest death-rates from this disease were recorded in St. Marylebone, Shoreditch, Poplar, Southwark, Camberwell, and Woolwich. In conclusion, it may be stated that the aggregate mortality in London last month from the principal infectious diseases was more than 31 per cent. below the average.

Infant mortality, measured by the proportion of deaths among children under one year of age to registered births, was equal to 115 per 1000. The lowest rates of infant mortality were recorded in St. Marylebone, Hampstead, Stoke Newington, Holborn, the City of London, and Woolwich; and the highest rates in Kensington, Hammersmith, Shoreditch, Stepney, Poplar, and Deptford.

THE SERVICES.

ROYAL NAVY MEDICAL SERVICE.

IN accordance with the provisions of Her late Majesty's Order in Council of April 1st, 1881, Fleet-Surgeon Robert Forbes Bowie has been placed on the retired list, at his own request, with permission to assume the rank of Deputy Inspector-General of Hospitals and Fleets (dated May 7th, 1905).

The following appointment is notified:—Surgeon G. E. Glynn to the *Excellent* for the *Grafton*.

ROYAL ARMY MEDICAL CORPS.

Lieutenant D. S. B. Thomson is seconded for service with the Egyptian Army (dated April 21st, 1905).

The undermentioned Captains to be Majors (dated April 29th, 1905):—H. C. French, E. M. Williams, and J. R. McMunn. The undermentioned Lieutenants are confirmed in that rank:—L. V. Thurston, A. W. Gater, and J. P. Lynch.

IMPERIAL YEOMANRY.

Essex: Charles Gordon Roberts (late Second Lieutenant) to be Surgeon-Lieutenant (dated May 3rd, 1905). East Riding of Yorkshire: Surgeon-Lieutenant R. H. Ashwin resigns his commission (dated May 3rd, 1905).

VOLUNTEER CORPS.

Royal Garrison Artillery (Volunteers): 1st Forfarshire: Surgeon-Lieutenant J. Gray resigns his commission (dated May 3rd, 1905).

Rifle: 2nd Tower Hamlets: Herbert Samuel Stockton to be Surgeon-Lieutenant (dated April 10th, 1905). 2nd Volunteer Battalion the Hampshire Regiment: Surgeon-Captain O. T. Stephenson resigns his commission (dated May 10th, 1905). 2nd Volunteer Battalion, the Manchester Regiment: Surgeon-Lieutenant J. A. K. Renshaw to be Surgeon-Captain (dated May 10th, 1905). 1st Volunteer Battalion the Royal Warwickshire Regiment: Wilfrid Allport to be Surgeon-Lieutenant (dated May 3rd, 1905). 1st Volunteer Battalion the Norfolk Regiment: Supernumerary Surgeon-Lieutenant J. M. G. Bremner to be Surgeon-Captain and to remain Supernumerary (dated May 3rd, 1905).

ROYAL ARMY MEDICAL CORPS (VOLUNTEERS).

The Manchester Companies: Lieutenant G. Fyfe Waterston resigns his commission (dated May 10th, 1905).

RECRUITING IN MANCHESTER.

In the year ending Sept. 30th, 1904, 5038 men offered themselves for enlistment in Manchester. Of these 1962 were at once rejected, while of those passed on for the medical examination 1522 failed to pass. 1378 were finally approved, so that about 69 per cent. were rejected "as unfit for military training and service." Much the same experience has been passed through at other recruiting centres in Lancashire. It is, therefore, very naturally stated that "the steady increase of physical infirmity amongst the class to which the army looks for its recruits provides ground for much anxious thought." Enlistment is not now popular, so that the recruits come largely from those who have difficulty in obtaining work, to whom it is an alternative preferable to starvation. The standard of height has been gradually lowered. In 1870 and immediately following the introduction of the short-service system the height of the infantryman was to be 5 feet 8 inches. In July of the same year the standard was lowered 2 inches to 5 feet 6 inches and in September to 5 feet 5½ inches. In 1871 it was dropped again to 5 feet 5 inches and in 1873 to 5 feet 4½ inches. In 1884 it fell to 5 feet 4 inches and to-day it is 5 feet 3 inches, while during the war in South Africa we were so short of men that little fellows of "only 5 feet" high were accepted. More serious than the deficient number of inches, on account of which indeed, only a small proportion were rejected, is the fact that many failed on account of "small chest measurement." The majority, however, were passed over because of bad teeth and "flat feet," while many had defective eyesight. It is said that thousands are turned away for flat feet, which is considered by some to be due to the wearing of clogs. There can be no question that among the class from which these would-be recruits come, the "ne'er-do-wells" and "out-of-works," who, thanks to the short-service system go in for "a spell of soldiering," there is grievous deterioration of physique, but it does not follow that it runs through the whole social scale. Their numbers are, however, so great that this decadence is a serious danger to the future of the nation. There are many and diverse ideas afloat as to the best means of remedying the evil, from the feeding of underfed children, without apparently much care about the removal of responsibility from the parents, to the scheme of universal military training advocated by the National Service League. There is little doubt that the latter, if the people and the Government would have it carried out, would do much not only for the physique but the morale of the younger generation, quite apart from any question of the defence of our shores.

THE WAR IN THE FAR EAST.

Notwithstanding the feeling of tension and anxious expectation with which the political world has of late been watching the course of events in regard to the presence of the Russian fleet in territorial waters in the Far East and the steps which were being taken by the French Government to insure the observance of neutrality, there has been a dearth of news, and especially of a medical nature, from the actual seat of war. At the present time the position may be succinctly summed up as follows. Admiral Rojdestvensky's fleet, which had been the cause of this grave difficulty, has left the Bay of Vanfong for some unknown destination. Admiral Togo's fleet has disappeared and its position is still a well-maintained secret, and with respect to the land forces we have of late heard little or nothing about Marshal Oyama's movements. As regards medical news, we learn from St. Petersburg that, according to the *Novoye Vremya*, there is in the region between Lake Baikal and Vladivostock a total of over 2000 sick and wounded Russian officers and 30,368 men.

Correspondence.

"Audi alteram partem."

AN INTERESTING NOTE UPON HOLDEN'S OSTEOLOGY.

To the Editors of THE LANCET.

SIRS,—I have only very recently read your obituary notice of my old teacher and friend, Luther Holden. It has much interested me. Referring to his great and admirable work, "Human Osteology," you say, "When it appeared (viz., in 1855) the reviews generally contained the remark, 'Why did no one think of this before?'" A most natural question, seeing how simple a matter it was. In connexion with it, however, there are a few facts relating to what preceded which may have an interest as illustrating the manner in which the practical applications of inventions often come about.

From 1846 to 1850 I was a student at St. Bartholomew's Hospital. During the winter session of 1848–49, with the view of acquiring for myself a more accurate knowledge of the attachments of muscle, I brought to the dissecting room the bones of the portion I was dissecting and carefully drew with a pencil the outline of the space occupied by the attachment of each muscle. When I had satisfied myself as far as possible of the correctness of these outlines I took the bone home and painted with Indian ink the whole surface included in the outline of each muscular attachment. When a bone was thus completed it was varnished. At this time Mr. Holmes Coote and Mr. Luther Holden were our demonstrators in the dissecting room. I passed the examination of the College of Surgeons shortly before Christmas, 1849, and that of the Apothecaries' Company in May, 1850. Before I left the hospital Mr. Coote asked me to lend him my marked bones. I did so with alacrity, feeling gratified that he took an interest in them, and he kept them many months. Shortly after he had returned them his little book on the bones was published with illustrations, on which were shown for the first time in fine outlines the attachments of the muscles. Not long afterwards Mr. Coote died. One day I had some of the bones in the museum when Sir William Lawrence was there. On showing them to him he looked at them attentively, then shrugged his shoulders and smacked his lips, as his manner was, and expressed much approval.

On quitting the hospital my father offered me a tempting opening in the old concern in Plough-court, Lombard-street, and being engaged and anxious to marry I gladly accepted it, and, abandoning all idea of practice, soon became closely occupied with other interests, and it was, I believe, some years after the publication of Mr. Holden's beautiful book that I first saw it. I had intended to let the above particulars die with me but the reviewer's remark quoted by you, "Why did no one think of this before?" seems to invite the foregoing statement.

I am, Sirs, yours faithfully,

Little Berkhamsted, May 9th, 1905. CORNELIUS HANBURY.

P.S.—I am sending the bones I marked to the museum of St. Bartholomew's Hospital, where, no doubt, they will be open to the examination of anyone interested and may afford a useful suggestion to some careful students.

THE TREATMENT OF TUBERCULOSIS OF THE LUNGS BY MEANS OF TUBERCULIN.

To the Editors of THE LANCET.

SIRS,—In my article on the Treatment of Tuberculosis of the Lungs by Means of Tuberculin and other Bacterial Derivatives, published in THE LANCET of April 8th last (p. 923), I made the following statement in criticism of the results obtained by Dr. Lawrason Brown in the treatment of pulmonary tuberculosis by means of tuberculin: "And criticising the figures given by Brown it would really appear that 204 out of 282 cases were apparently cured without tuberculin, which is 72·3 per cent.—*greater* than the results with tuberculin."

Dr. Lawrason Brown has pointed out that this is a mistake on my part and that instead of 204 the figures should be 173. This would give a percentage cure without tuberculin of 61·3 per cent. and Dr. Lawrason Brown has pointed out in his admirable article in the *Zeitschrift für Tuberkulose und Heilstättenwesen*, 1904, Band vi., Heft 4, S. 235, that he has been able to secure an apparent cure in similar cases, using tuberculin, of 72 per cent., which is 10·7 per cent. better than when tuberculin was not used. I am the more wishful to correct this mistake, for Dr. Lawrason Brown has taken the greatest care to avoid making extravagant claims in favour of tuberculin. Dr. Lawrason Brown's results support the favourable reports published by others on the value of tuberculin in suitable cases and do not militate against them, as my remarks may have led your readers to think.

I am, Sirs, yours faithfully,

May 8th, 1905. H. BATTY SHAW.

IF TUBERCULOSIS SHOULD BE CERTIFIED, WHY NOT SYPHILIS?

To the Editors of THE LANCET.

SIRS,—In the correspondence on this subject in THE LANCET one point appears to have escaped notice—viz., that before notifying a disease it is necessary to diagnose it. In the evidence before the recent committee on physical deterioration Sir Alfred Cooper stated: "It is advisable that there should be special departments at general hospitals for the treatment of this class of disease and all such cases should be relegated to that department. It should be under the charge of someone specially skilled in that branch of professional knowledge and a course of instruction in that subject should be compulsory for every student. These special departments have been in existence for years past in the majority of European countries and in America." In fact, in this country there is no systematic teaching of syphilis and venereal diseases and the majority of medical men go into practice knowing little or nothing of two of the most widespread and disastrous diseases which afflict mankind. Until this state of affairs is altered it is idle to speak of notification. I am, Sirs, yours faithfully,

May 4th, 1905. C. F. MARSHALL, F.R.C.S. Eng.

THE RELATIONSHIP BETWEEN PLAGUE-INFECTED ANIMALS AND THE DISEASE IN MAN.

To the Editors of THE LANCET.

SIRS,—In dealing with Professor W. J. R. Simpson's "Treatise on Plague" in THE LANCET of May 6th, p. 1205, your reviewer attributes certain experiments carried out in Natal on the "relationship between plague-infected animals and the disease in man" to Mr. Ernest Hill. May I be permitted to point out that this is not quite correct? A full account of the experiments in question is embodied, it is true, in Mr. Hill's "Report on the Plague in Natal," 1902–03, but practically the whole of the work was carried out by Mr. H. Watkins Pitchford, the Natal Government bacteriologist, and Dr. Haydon.

I am, Sirs, yours faithfully,

H. S. WILLSON, M.B. Cantab.

King's College, Strand, W.C., May 9th, 1905.

ROYAL COLLEGE OF SURGEONS IN IRELAND.—At a meeting of the President, Vice-President, and Council, held recently, the following examiners were elected: Anatomy: Patrick Joseph Fagan and Alexander Fraser. Surgery: F. Conway Dwyer, Andrew Fullerton, Thomas E. Gordon, and R. Lane-Joynt. Physiology and histology: Charles Coppinger and E. L'Estrange Ledwich. Pathology and bacteriology: Robert Allen and Arthur Hamilton White. Midwifery and gynæcology: Frederick W. Kidd. Biology: John J. Burgess. Ophthalmology: Arthur H. Benson and Patrick W. Maxwell. Sanitary law and vital statistics: H. Benson Goulding. Engineering and architecture: J. Charles Wilmot. Chemistry and physics: Edwin Lapper and Robert J. Montgomery. Dental surgery and pathology: George M. P. Murray and William G. Story. Mechanical dentistry: William Booth Pearsall and Daniel L. Rogers. Languages: L. J. Woodroffe. Mathematics, physics, dictation, and English essay: J. W. Tristram.

THE INTERNATIONAL ASSOCIATION OF THE MEDICAL PRESS.

COMMITTEE MEETING AT BERNE.

(FROM A SPECIAL CORRESPONDENT.)

(Concluded from p. 1233.)

Berne, May 1st.

ON the reassembling of the committee in the afternoon, Dr. POSNER, from the chair, opened a discussion on the means of drawing the affiliated associations closer together and rendering the international organisation of real service to the public and to its members. He thought that the publication of an "Annual" might help if it supplied the members with a list of the journals belonging to the International Association, with the rules governing the national associations, and with accounts of the meetings that had been held and of the measures taken. It would be something to show, some testimony and proof that useful work had been done. Such a publication should be issued in time for the Lisbon Congress and if not brought out every year it should at least appear before every great international medical congress.

Dr. BLONDEL and Dr. BOSSI thought that such a publication would make others more anxious to join the association and the principle that such an "Annual" should be issued was adopted.

Dr. PÉCHÈRE then suggested that journals on their title page should mention the fact of their affiliation to the International Association.

Dr. JAQUET inquired how it was proposed to separate the genuine medical press from publications that were issued by manufacturers merely to advertise their drugs, instruments, &c. The latter were often mistaken for *bonâfide* scientific publications. The proclamation of affiliation should have a moral and scientific effect, it should constitute a privilege, but it was necessary to see that it was worthily employed.

Mr. ADOLPHE SMITH said that he gathered that before anything of the sort could be done a considerable work of purification had to be accomplished by some national associations. Before the Conference of Monaco and the publication of the rules there proposed an undesirable element had gained admission.

Dr. PÉCHÈRE thought that the work of purification had been accomplished.

Dr. BOMBARDA said that certainly this was the case in Portugal.

Mr. ADOLPHE SMITH, in answer to questions, said that in England the difficulty as yet was not how to expel unworthy members but how to find a sufficient reason to prevent such from joining.

Dr. BLONDEL explained that at first in forming an International Association it was necessary to accept what existed. An international association that existed only as a project could not dictate to national associations that had been in practical life for several years. Now, however, they might begin to register members and where a national organisation had members whose qualifications did not correspond with the Monaco rule the fact should be mentioned.

Dr. DOLÉRIS promised that the work of purification would be undertaken in France. Many applicants for membership of the French Association of the Medical Press had been rejected. Of late, however, a leakage had occurred.

Dr. LARRA explained that the Spanish Association of the Medical Press had been in existence for 23 years. It was not possible to exclude journals of 23 years' standing. Fortunately, these were all honourable publications, but the rules differed, inasmuch as the organs of allied professions, of chemistry, and of the veterinary surgeons had been admitted.

Dr. BLONDEL was very anxious to know who was going to undertake the work of purification. Was it the executive of each national association? He thought that some of them would fear to act and, moreover, did they as a central authority possess the power? On paper, at least, it seemed to exist in the second paragraph of Article XI of Chapter II.

Dr. PÉCHÈRE considered such power excessive.

Dr. BOMBARDA said that the committee could not go beyond the national societies or interfere with them. Each nationality must do its own work of purification. Besides, a journal might be very honourable to-day and might degenerate to-morrow. An international committee could not watch such fluctuations and be responsible for all the nations.

Mr. ADOLPHE SMITH also insisted on leaving the greatest possible autonomy to each nation. Each national association must bear the sole responsibility of the selection which it made.

Dr. BLONDEL, however, thought that the Berne Conference had the right and the duty to call upon the national organisations to endeavour to carry out the general principles as to membership and to supply full information as to the measures which they were taking to that effect. Dr. Blondel, as general secretary of the International Association, moved:—

That the present meeting of delegates, so as to conform with the rules, should authorise him to write to the general secretaries and ask them for a list of proposals or rules of their respective National Associations which relate to the journals that they desire should be affiliated to the International Association, at the same time pointing out to them that the assembly of delegates united at Berne expressed the desire that the National Associations should only propose such journals as were exclusively scientific publications and excluding publications distributed gratuitously.

This was adopted unanimously.

Several speakers thought that the power of the International Association would be greatly increased if one or two important questions on which all parties agreed were simultaneously discussed in the journals of all the nationalities represented. The presence of wealthy patients, who could afford to be treated at home, in the beds of hospitals intended for the poor was an example of the sort of question—a grievance which existed in all countries and about which joint international pressure could be brought to bear. This suggestion was very generally approved and perhaps some such subject will be submitted next year at Lisbon. It was also urged that the card of membership would be of use if all members made it a matter of duty to honour and to assist those who bore this card, especially when travelling. This was agreed to and the card will shortly be issued. But it must be borne in mind that to be a member of the International Association the candidate must notify the international general secretary, Dr. Blondel, that he approves the rules, and this must be accompanied by a certificate from the president of his own national association to the effect that he is a fit and proper person. It will be for the presidents of national associations, where the work of purification is going forward, to be careful how they endorse applications made to the international general secretary. The latter will issue cards of membership only in response to the signature of the president of a national association of the medical press.

The very practical question concerning the work to be done at Lisbon next year then came up for discussion. The first point to decide was whether there should be at Lisbon an open congress such as had been held in Paris and Madrid, at which the entire medical press of the world would be invited to attend, whether belonging or not to the International Association. On the one hand such a course has the advantage of drawing together a large number of persons and it provides an opportunity of recruiting new members for the association. Moreover the authorities are more ready to take note of a large congress and to pay some sort of compliment to its members. On the other hand, such congresses can only express pious wishes, for the International Association of the Medical Press cannot allow itself to be governed by resolutions adopted at a congress where a great part of the members present do not belong to the association. The association may have something, perhaps even a great deal, to learn from expressions of opinion gathered from outside but its policy can only be determined by the majority within its own ranks. Therefore when a congress is held it is necessary to have at the same time a meeting of members and it is not easy to manage both together. This difficulty was felt keenly at Madrid, where the better part of two days was spent in the magnificent hall of the Central University listening to fine speeches delivered by irresponsible persons, and when, meeting later in a small side room, the members of the association wanted to attend to their practical work no sufficient time remained for this purpose. Yet there are occasions when the noise and publicity of a large congress may be of use, but such use is more local than international. Indeed,

a congress is generally a means of stimulating and of educating local opinion, of creating or of reviving interest in the questions discussed. Therefore it should be left to the Association of the Medical Press where the meeting was to take place to decide whether this should be a general meeting of the International Association or a congress with its doors open to all comers. A proposal to this effect made by the British delegate was at once adopted by the committee. Dr. BOMBARDA then explained that his hands were so full with the organisation of the Fifteenth International Congress of Medicine that he feared he could not undertake to organise yet another such assembly. After a good deal of conversation it was agreed that there should be no congress of the medical press but that a general assembly of the entire International Association of the Medical Press should meet on Tuesday and Wednesday, April 17th and 18th, 1906, at Lisbon; that is on the two days previous to the day fixed for the opening of the Fifteenth International Congress of Medicine. No one will be admitted who is not a member of the International Association of the Medical Press, but as all who are members can attend there will be no question of sending delegates. The vote will then be by nationality according to Article XII. of Chapter III. of the rules. The Portuguese Association of the Medical Press will make arrangements to provide a room for the meetings and will probably be able to print a report of the proceedings. Nothing more is offered, but, on the other hand, no entrance fee will be charged. Dr. BOMBARDA thought that as practically all who will attend the meeting of the medical press will also be attending the Medical Congress it would greatly simplify matters to avoid having two sorts of invitations, railway tickets, &c. All the advantages and hospitality offered would come to them as members of the Medical Congress.

Dr. PÉCHÈRE and Dr. BLONDEL thought that the Medical Congress should offer some special recognition or privilege to the International Association of the Medical Press. For instance, 18 cards of honorary membership might be given to the 18 members of the Committee of the International Association of the Medical Press.

The subjects to be put down on the agenda for the Lisbon meeting were next considered. The first question inscribed, with Dr. Blondel and Dr. Posner as reporters, relates to publishing a brief summary of the original articles for purposes of ready reference. They will also report on the advisability of issuing a bulletin. From France a third subject will be introduced—namely, the adoption of the title of "Doctor" for the purpose of signing articles or even advertisements when the writer is not a medical man. Dr. Bossi wants to discuss the relations of medical practitioners with the political press and Mr. A. Smith proposes that Portugal should be allowed two representatives instead of one on the International Committee. Of course many more questions will be introduced for debate before the date of the meeting at Lisbon.

A somewhat animated discussion followed in regard to the work of the press at the Lisbon Congress of Medicine. How could the organisers of the Congress help the press and how could the press be of use to the Congress?

Dr. BOMBARDA said that the faults committed at Madrid had been carefully noted, that the very best intentions prevailed at Lisbon, and that full confidence might be placed in the organisers. There was some difficulty in explaining, in making it quite clear, that every confidence existed as to the good intentions of the organisers of the Lisbon Congress of Medicine. At the same time the organisers could not be expected to know what were the requirements of the press unless they were told. Instead of every individual journalist sending in his own personal request or complaint the International Association of the Medical Press had been formed to present once and for all such requests or such complaints, and this in an authoritative manner as the desire or criticism not of one journalist or of one paper but of many papers belonging to many nations. Such collective representations would save much time and would facilitate the work of the organisers of medical congresses. To-day at Berne a committee of technicians were gathered together competent to enter into minute details of what was necessary, so that the work of the press, on which the success of the congress in the main depended, could be best accomplished. For instance, a room where members of the press could work quietly was very necessary. At Madrid such a room was provided but was invaded by a constant flow of distributors of advertisements and touters. Dr. Bombarda promised to do as much as the geographical conditions rendered possible. They were endeavouring not to scatter the Congress of Medicine but to hold it under one roof. This would be that of the new medical schools which were now being built. But the congress had already 20 sections and the number was increasing. Then they had 13 separate offices, a lounge, a ladies' saloon, &c. The committee protested that the work of the press was of more importance than a saloon for ladies, particularly as the crush room of the principal theatre had been set aside for their use during the congress week. It was decided that the members of the press should have a special card over and above the ordinary card of members of the Congress of Medicine and that a special room should be placed at their service and a doorkeeper appointed who would not allow anyone to enter unless he showed the press card. This would be done even at the sacrifice of a subsection if necessary. But it was difficult to say how large this room would be—first, because there was but limited space; and secondly, because it was difficult to ascertain how many working journalists would be present. It had been said, but it was not possible to discover on what authority, that there were 70 journalists at Madrid and 80 at Rome. The next point was with regard to letters. There would be a post installed at the congress, but pressmen had too much work to do to wait in the midst of a large crowd for their letters. Letters headed "Press Bureau" or "Press Service" should be put into separate and special alphabetically marked pigeonholes and conveyed either to the press room or served out by a special attendant at a different part of the counter.

In regard to the reporting of the proceedings in the sections there will be in each section a table set apart for the press. Further, the secretaries of the sections will be requested to remain in the room for a little while after their section has adjourned. They will then read out slowly to the pressmen gathered round them the summaries of the speeches which each person who takes part in the discussion is at once requested to write. Those members of the Congress who are to propose motions will be requested to bring several copies of the same with them for distribution to the press. Efforts also will be made to establish on the spot an office where writers of papers or speeches can go and have copies of the same promptly printed at their own expense. This was done with great effect in Paris in 1900 and was of service to the authors and to the press. It was also suggested that medical students speaking other languages than Portuguese should be invited to attend and to help as interpreters. Then the request was made that a representative of the International Association of the Medical Press should be allowed to speak at the inaugural meeting. Dr. Bombarda promised that he would endeavour to make the necessary arrangement. The press is a Power and as such should speak with the representatives of the Powers. This principle was accepted at Madrid and there was no reason why it should be set aside at Lisbon.

On the other hand, the delegates at Berne were anxious to know what on their side they could do to help the organisers of the Lisbon congress. They could always be of use in putting into circulation whatever it was desirable should be made known and each national secretary placed himself at the disposal of Dr. Bombarda to notify the press of his country whenever the need or occasion arose.

The second day was mainly devoted to copyright questions. At the opening of the proceedings a communication was read notifying the formation on April 26th of the Association of the Dutch Medical Press. The initiative had been taken by one of the best papers in Holland and the association consisted of 14 papers, three issued every month, one quarterly, and one publication which qualifies itself as "irregular."

The minutes of the previous meeting were read and confirmed and then Mr. ADOLPHE SMITH, as instructed by the Association of the British Medical Press, moved that:—

Copyright of articles in a medical journal should be of such a nature as to preclude advertisers from misusing such articles or any quotations therefrom.

Dr. BLONDEL having remarked that he was under the impression that the French law punished all who made detrimental quotations the motion was carried unanimously.

Dr. DOLÉRIS, on behalf of the Association of the French Medical Press, described at length difficulties in regard to the reproduction of the medical thesis which forms part of the examination for the doctor's degree. As this question is fully explained in the motion proposed it may suffice to give the text. Dr. Doléris moved that:—

Considering, firstly, that practically the inaugural thesis is an obligatory test accompanying the examination and public debate. Secondly, that if this thesis can be published as a pamphlet and sold to the profit of the author or his assigns this profit is very much

attenuated by the obligation of sending a considerable number of copies to the professors attached to the universities, the libraries of the faculties and of the schools of medicine; and that further the thesis of the doctorate of medicine is generally and gratuitously distributed by the author himself to a large number of members of the profession, that all this constitutes an extensive publicity which considerably reduces the commercial value of the work. Thirdly, that the reproduction in a journal of an inaugural thesis, even if it possesses a really original character instead of being a mere compilation followed by the same conclusions that are given in classical text-books, can only confer on the author professional and moral advantages that are vastly superior to the profits of the sale of the work. Fourthly, that finally the reproduction of medical works, articles, lectures, and notes has become customary:—The delegates constituting the committee of the International Association of the Medical Press express the opinion that the reproduction of an inaugural thesis cannot, as a rule, be considered to constitute an appreciable material damage. That, further, there can be no question of a penal offence, as the evident intention of the journalist is to render service to the author by giving him a gratuitous publicity.

The feeling on this proposition was not unanimous though it was adopted by the majority. It appears that in France no less than 280 copies have to be sent of the thesis to the various faculties. At the Berne Bureau on International Copyright the question of this form of medical thesis had never been discussed.

An important point was raised by Dr. POSNER. He said that German journals occasionally received interesting papers from foreign, notably from Italian, professors. These might be accepted and published in a German journal. Then some time afterwards it was discovered that they had already appeared in an Italian periodical. No mention of this had been made when the paper was offered and it was not always certain that the translation offered was an authorised translation or even a correct translation. Such difficulties became more acute when dealing with, for instance, the Russian or the Polish language.

Dr. BLONDEL remarked that according to the Berne International Convention on Copyright authors had no right to allow several publishers to issue the same work.

Dr. PÉCHÈRE insisted that no publisher or journal should be offered a work that was going to appear elsewhere in whatever country or language without being fully informed of the fact.

Dr. POSNER pointed out that the priority of publication was also involved and did not belong to the purchaser of a work if it could be shown that it had already appeared elsewhere, though this might be in another country and another language. He therefore proposed the following motion:—

The Conference of Berne,—considering that some authors are in the habit of publishing their works simultaneously in several journals without informing the editors of these journals, that this custom gives rise to great difficulties for the orientation of literature and the establishment of priority in literary property, and that it is injurious to the rights of the publishers who have purchased these works,—declares that it is not admissible that an author should be able to publish the same work in different journals unless it be a translation authorised by the original publisher. The members of the association are therefore authorised to insist that the authors who offer them an original work shall be called upon to affirm that the work is not published or about to be published elsewhere.

The motion was carried unanimously and this concluded the labours of the Conference.

Dr. POSNER, who had occupied the chair throughout, then rose and said a few parting words. He thought that the committee had every reason to offer special thanks to Dr. Bombarda for his presence. He had come a very long way and they all hoped to see him again next year at Lisbon. His presence at Berne had been of the greatest use in view of the forthcoming International Congress of Medicine, of which he was the general secretary. He might carry home the assurance that the press was unanimous in wishing him all success in the organisation of the next medical congress. Every member of the conference assembled at Berne would do his best to promote its success.

The chairman then dissolved the meeting and the members parted company well satisfied with the interesting and practical discussions which had been held during the two days.

MANCHESTER.

(FROM OUR OWN CORRESPONDENT.)

Infants at School.

AT the last meeting of the Lancashire county council Dr. Trimble drew attention to the large numbers of children under five years of age now in the elementary schools. They were very liable to catch infectious diseases which often proved fatal and he thought that their exclusion would be of great service from a public health point of view and would leave more room for older children, thus rendering it unnecessary to build some of the new schools which were said to be required. The chairman of the health committee, Mr. R. Sephton, said that the committee had appointed a subcommittee to discuss the subject with the education committee. From some points of view it would be desirable to exclude young infants from the schools, but though they may not assimilate much literary food they learn something of regularity of habit, of combined movements, and so forth, while their mothers would be greatly perplexed when the children were not allowed to attend the schools—those conveniently arranged day nurseries where for several hours a day they are so well looked after. This may not be the proper function for the school but it suits the parents, and in the manufacturing districts where the mothers work in the mills the infants would probably be left to the care of some old woman who might or might not attend to them properly and where the hygienic arrangements would most likely be worse than at the school. Whatever may be the case with older ones it does not appear that there is much fear of overburdening the minds of the youngest children, as few of the teachers consider them very seriously as regards tuition. As to the serious question of the epidemics in the schools there is, of course, some difference of opinion. In a letter to the *Manchester Guardian* Mr. W. Percy Bean says that in his opinion bad ventilation is the cause and that "the splendid well-built modern schools are the worst offenders," not that ventilation is ignored but because "the modern buildings are built of less porous material and also because the arrangement of class rooms is entirely against good natural ventilation." The older, more rickety buildings had the advantage as to this point but it is more than doubtful that county councils will allow of school ventilation being carried on through porous walls. He says, moreover, that on analysis of the air the same thing obtains in the "well-built, modern mill" where it is much worse than in the older ones. "This, of course, applies to those mills which are not ventilated by means of power but (depend) on doors and windows and other natural means of ventilation." He makes a very serious charge as to the "average school," which is, he says, "hundreds per cent. worse in air sewage than a cotton manufacturer would be brought before a magistrate and fined for." "A normally pure air contains about four volumes of carbon dioxide in 10,000," and a mill-owner would be fined if it were found to contain more than an additional five volumes, and he goes on to say, "I doubt if you would find in an ordinary modern class-room less than 20 to 30 volumes of carbon dioxide per 10,000 or from 400 to 600 per cent. more than a manufacturer would be fined for." He states that during the last 12 years he has made thousands of analyses of the air of schools and mills, and has "never yet found a school which could possibly compare with an average mill." He considers that the lowered vitality of the children from breathing "air sewage" increases the susceptibility to infection and that if the schools were properly ventilated the epidemics would cease. He does not think natural ventilation sufficient but that "power will have to be used." Efficient ventilation seems the most difficult problem that architects have to solve and no one will say that their success has hitherto been marked. Most certainly if these statements as to the air of our elementary schools are true the matter should be dealt with without delay.

Manchester Soot.

At the meeting of the Literary and Philosophical Society on May 2nd an interesting paper was read on the composition of the soot which Manchester produces in rare abundance. Before the paper was heard, however, Sir William H. Bailey delivered his inaugural address as president. He claimed that for original work the society was the equal of the Royal Society of London, "not ignoring the work of Sir Isaac Newton, Halley, Boyle, and other great schoolmasters of God's creation. In its ranks had been those great discoverers of the two great departments of the conservation of energy and the indestructibility of matter—Dr. Joule and Dr. Dalton." Coming after them he named William Sturgeon, "the discoverer of the soft iron electro-magnet, the 'unit invention' of electric traction and electric light, &c." Whether the Royal Society will admit the claim to equality is doubtful, or perhaps not doubtful, but the claim to distinction of Joule and Dalton is granted all the world over.

It is, however, pleasant for Manchester people to hear this cheery estimate by Sir William Bailey of the society of which they are excusably proud. The paper by Professor Edmund Knecht was on Some Constituents of Manchester Soot. He pointed out that smoke and soot did not consist of carbon alone, as popularly supposed, and showed that the soot from the "fat" coal used in the Manchester district contained at least 50 per cent. of substances other than carbon and named the following substances which had been isolated from an average specimen of Manchester household soot: snow-white samples of ammonium chloride, ammonium sulphate, calcium sulphate, and a beautifully crystallised paraffin hydrocarbon, similar in properties and composition to one known to exist in bees' wax. There were also 13 per cent. of heavy hydrocarbon oils. Professor Knecht had prepared a dye-stuff which produced absolutely fast shades of brown on cotton. Analysis showed that the London soot and that of Prague, especially that from Bohemian lignite, were much cleaner than Manchester soot. He commented on the drawbacks attendant on the presence of soot in our atmosphere, chiefly from household fires, but did not hope for any amelioration unless the use of more efficient fire-grates could be made compulsory.

Purer Streams.

Impure air and foul water are two evils that man is always producing and always trying to remedy, at least in these days. Beginning, as they did, by small degrees when the population was less dense than now, the evil was scarcely noticed but it has now assumed such proportions that it is most difficult to effect a remedy. As to smoke and soot, very little has been accomplished and not much perhaps as to our rivers and streams, but still quite enough to justify Sir J. T. Hibbert, at the meeting of the Mersey and Irwell joint committee on May 2nd, in the cheerful view he took of the progress already made in Lancashire. He said that now there was only one out of the 95 local authorities that had not provided in any way for its sewage and only five manufacturers. It is encouraging to know that Manchester and Salford, whose task has been most arduous and costly, were complimented on what they had done. The report of Mr. R. A. Tatton, the chief inspector, showed that of 23 effluents recently tested only four were below the committee's standard. A good deal more purification, however, must be done before many once famous trout streams are restored to their former condition.

Manchester Bequests.

Miss Hannah Beswick of Mossley has left £1000 each to the Ashton-under-Lyne Infirmary, the Manchester Royal Infirmary, the Manchester Eye Hospital, and Henshaw's Blind Asylum, and the residue of her estate, nearly £24,000, after certain bequests amounting to £700 or £800 to some of the local churches, to be divided equally between the four institutions named above.

May 8th.

LEEDS.

(FROM OUR OWN CORRESPONDENT.)

The late Sir John Barran.

By the death of Sir John Barran Leeds has lost one of its citizens of whom it has reason to be proud and the University of Leeds has to mourn the loss of one of its first honorary graduates and one of its most loyal and consistent supporters. Sir John Barron was one of those who founded the Yorkshire College which is now merged in the new university; he was a member of the council from the time that body was constituted, chairman of the finance committee from 1896, and from 1901 till his death he was treasurer. Himself a generous donor to the funds of the college and university he possessed the happy power of stimulating generosity in others. The relation of Sir John Barran to the city and University of Leeds was concisely and admirably expressed as follows by the Vice-Chancellor, Dr. N. Bodington, when the honorary degree of Doctor of Laws was conferred on him last October:—

Commercial enterprise, accompanied by high integrity, benefits the commonwealth as well as the individual, and had Sir John Barran merely introduced a great and successful industry into Leeds his would have been no sterile public record. But Sir John Barran has throughout a long life always been regardful of claims of the community upon his time, thought, and liberality. When the foundation of the Yorkshire College was proposed no one stood before him in welcoming and aiding the scheme. He is one of the few original members of the council of the College who are still with us and he is one without whose continual and energetic efforts on behalf of our finance the University would hardly have come into being.

Leeds Sewage Schemes.

With a steady increase in the population of the city the sewage problem has been a pressing one for some time. Extensive experiments have for years been carried out at Knowesthorpe under the chairmanship of Colonel Harding and these have included the bacteriological treatment of sewage. Some years ago the corporation purchased the extensive estate of Gateforth, near Selby, with the intention of instituting a sewage farm. This would have involved the laying of a conduit, which it was proposed to build of brick, some 14 miles long, the route lying through the lands of Temple Newsam and over coal-fields. The opposition to this was very strong and a committee of the House of Lords reported that it could not accept it as presented. This was in 1902 and the sewerage committee called in expert engineering advisers to consult with the city engineer and arranged that their joint report should be submitted to an independent firm of experts. This resulted in a modification of the Gateforth scheme being recommended. By this screens and grit tanks would be provided at Knowesthorpe, the present sewage station, and pumping plant to raise the sewage to a level of 85 feet. The sewage would then be carried in three 47-inch steel pipes to Gateforth, where there would be settlement tanks and percolating filters and where there would be barren grounds for the disposal of the sludge on the land. It would only be necessary in the first instance to lay down two-thirds of the pumping plant and two of the three tubes. This would deal with 80,000,000 gallons of sewage and would cost about £1,000,000, while the annual cost, including interest and sinking fund on capital, would be about £60,000, or 7½*d.* in the £ on the rateable value of Leeds. Other schemes are being discussed and the corporation has shown its earnestness by taking the opportunity offered by the resignation of the city engineer to make two appointments, one officer having to devote himself exclusively to the work of a sewerage engineer at a salary of £1000 per annum. The French delegates of the Seine department, who are spending a week in England to study our latest scientific methods for the disposal of sewage, paid a visit to the Leeds works on May 3rd and all the methods adopted were shown to them.

Memorial to Mr. Christopher C. Weatherill.

Mr. Thomas Brock has, I understand, accepted the commission of the board of the General Infirmary to execute the memorial to Mr. Christopher Charles Weatherill, under whose will, it may be remembered, the infirmary benefits so largely. The memorial will probably take the form of a bas-relief and will be placed in a ward to be named after the testator.

The University of Leeds.

On the invitation of the Mayor of Bradford the Marquis of Ripon, as Chancellor of the University of Leeds, accompanied by Mr. A. G. Lupton, the Pro-Chancellor, has recently had an opportunity of addressing a large and influential body of the leading citizens of Bradford and of appealing to them for their sympathy and support in increasing the foundation fund of the new university. His lordship said that the aims and aspirations of the University of Leeds were much wider than those of a mere technical school and Mr. Lupton pointed out that the university drew its students from a wide area, for less than one-fourth of its registered day students belonged to Leeds, while no less than 58 students studying arts, science, medicine, and law were registered from Bradford.—At a meeting of the Hull education committee a letter was read from the Pro-Chancellor appealing to the various county boroughs for grants in aid of the work of the university. The letter was referred to the higher education subcommittee with the hope that it would see its way to associate Hull with the university in connexion with its technical work.

May 9th.

WALES AND WESTERN COUNTIES NOTES.

(FROM OUR OWN CORRESPONDENTS.)

Health Report of Merthyr Tydfil.

THE annual health reports which relate to large industrial centres are always of interest and that of Mr. D. J. Thomas, the medical officer of health of Merthyr Tydfil, is no

exception. The birth-rate in this large Welsh colliery town, with a population of 72,754, was 38·5 per 1000 in 1904, a very much higher rate than that recorded for the whole of England and Wales (27·9). The birth-rate, even when calculated in proportion to the number of married women at child-bearing ages—from 15 to 45 years—is still much higher than that of the rest of the country. In 1903 there were in Merthyr 308 births to every 1000 married women under 45 years and in 1904 there were 314, while in England and Wales during 1903 the ratio was 233 per 1000. The death-rate in Merthyr during 1904, after being corrected for sex and age, was 20·9 per 1000, but in calculating this rate there does not appear to have been any account taken of the deaths of Merthyr residents in the county asylum at Bridgend. The infantile mortality-rate of 186 per 1000 births, though higher than that of the two immediately preceding years, was much below the average rate (210 per 1000) of the 10 previous years. There were no fewer than 523 deaths in 1904 among children under 12 months old, the total number of deaths at all ages being 1437. The two most important causes of this deplorable loss of life are, in Mr. Thomas's opinion, the increasing tendency of mothers to neglect their primary duty of nursing their infants and the ignorance displayed in the artificial feeding of babies. The five sanitary inspectors appear to have done a great deal of useful remedial work during last year, but there would seem to be plenty of room for the employment among the Merthyr mothers of one or more female inspectors or health visitors.

Brecon and Radnor Asylum.

At the end of March last there were 329 patients in the joint asylum at Talgarth, of whom 74 were from Cardiff, the corporation of that town having to find accommodation for Cardiff lunatics in other institutions until the completion of the new asylum which is being erected at Whitchurch. A charge of 14*s.* 6*d.* per week for quiet chronic cases and of 17*s.* 6*d.* per week for patients who require extra supervision is being made by the joint committee. The unions in the two counties of Brecon and Radnor are now being charged 12*s.* weekly for patients sent to the asylum. The question of enlarging the Talgarth institution in order to be able to receive patients from Swansea is still under consideration. At present Swansea lunatics are sent to the Bridgend asylum but the Glamorgan county council has given notice to terminate this arrangement.

The Cardiff Milk-Supply.

In his recently issued annual report on the health of the Llandaff and Dinas Powis rural district, which adjoins the town of Cardiff, the medical officer of health (Dr. R. Prichard) points out that there are still in the district some farmyards more or less in their primitive state which renders it impossible for the cattle or the milkmen to keep clean. At one of these farms from which milk is supplied to Cardiff there have been two cases of typhoid fever and the corporation has taken action under Section 4 of the Infectious Disease (Prevention) Act, which enables a sanitary authority to prohibit the sale of milk from infected premises.

The Treatment of the Mentally Defective.

At the annual conference of the West Midland Poor-law guardians held at Malvern on May 2nd there was a discussion on the protection and detention of the mentally defective. Mr. H. J. Manton, J.P., of Birmingham, defined the mentally defective as "imbeciles, mild or harmless lunatics, feeble-minded, and epileptics." He contended that the Elementary Education (Defective and Epileptic Children) Act, 1899, should not remain permissive but should be made compulsory. This Act provides for the establishment of special classes and special educational facilities. Mr. Manton also urged that further legislation was necessary which should require medical officers of health to furnish year by year statistics of the number of mentally deficient persons residing within their districts and that justices should be empowered to grant orders for the detention of such mentally deficient persons on the application of the local authorities. Resolutions were passed by the conference expressing the opinion that the 1899 Act should be made compulsory and that powers should be given for the detention of such mentally defective persons as are proved to be incapable of self maintenance and self protection, subject to accommodation for such persons being found apart from workhouses, and to a grant in aid being made from imperial funds for all cases so provided for.

Crownhill Convalescent Home, near Plymouth.

The annual meeting of the subscribers to the Crownhill Convalescent Home was held on April 28th under the presidency of Sir John Jackson. The medical report stated that 267 patients were admitted during 1904. The financial statement showed that the income amounted to £504 and that an unfavourable balance of £12 remained.

May 8th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

Glasgow Fever and Small-pox Hospitals, Belvidere.

THE report for the year ending May 31st, 1904, has just been issued. During the year 3257 patients were admitted and of these 296 died. This gives a mortality of 9·1 per cent., which is only three-fourths that of the preceding year. This is explained by the fact that nearly all the fevers treated in the hospital were of a milder type than in the previous year. The mortality from enteric fever was 15·7 per cent., as against 21·6 per cent.; diphtheria 14·2 per cent., as against 18·5 per cent; scarlet fever, 4·5 per cent., as against 6·3 per cent.; whooping-cough, 14·3 per cent., as against 22·8 per cent.; measles, 7·3 per cent., as against 6·3 per cent.; and small-pox, 7 per cent., as against 9 per cent. in the last outbreak which occurred in 1901–02. During the year 1000 cases of small-pox were admitted, of which 96 were unvaccinated. Of these 73 recovered and 23 died, giving a mortality of 23·9 per cent. Among the 867 vaccinated cases 38 deaths occurred—a mortality of 4·38 per cent. An epidemic of "sore-throat," which broke out among the staff and patients of the hospital was found to be associated with an eruption affecting the udders of the cows at the dairy farm which supplies the hospital with milk.

Infectious Disease and Compensation.

At the Scottish Trade Unions Congress held at Hawick last week a motion proposed by one of the delegates was unanimously carried by which the congress recognised the hardships inflicted on all workers who were compelled to cease work through infectious disease in their families for the protection of the community without compensation. It was agreed to instruct the Parliamentary committee to take steps to bring the anomaly before the proper authorities.

Glanders.

A somewhat interesting case came before the central police-court of Glasgow recently in which a contractor was fined £2 2*s.* for removing, or causing to be removed, without authority, from his stable to a slaughter-house the carcass of a horse which was diseased with glanders. The accused stated that he thought the animal was suffering from cold, that he had no reason to suspect glanders or he would have separated the horse from the others in the stable, and that he had never seen a horse suffering from glanders and therefore could not be expected to recognise the symptoms. The assessor said that they punished people for being ignorant if they did not observe the proper precautions. The magistrate, in inflicting a modified penalty, remarked that he did not question the *bona fides* of the accused but thought that if he had used reasonable diligence he could have obtained knowledge as to the nature of the disease.

The Prevention of Cruelty to Children.

The Glasgow committee reports that during the month of April 130 cases of reported cruelty to children were investigated by the officials. After the usual remonstrances had failed to effect an improvement 14 parents were prosecuted and received sentences varying from 60 days' to six months' imprisonment. At the children's shelter 36 children were admitted, 25 children were clothed, and 1013 meals were given.

Ayrshire Sanatorium for Consumptives.

Although a considerable sum of money has been collected for this scheme there has been some hesitation on the part of the committee in proceeding with the plans. A short time ago a meeting of contributors was held at which it was suggested that, owing to the apparent lack of success of similar institutions for the working classes, no further steps should be taken for the present to build the sanatorium and that the money should be applied meanwhile to send cases

from Ayrshire to other sanatoriums until it could be ascertained that the treatment was likely to be successful. By a considerable majority, however, it was decided to go on with the plans. In deference to the opinions expressed by several of the large contributors another meeting of subscribers was held last week to consider whether building should be delayed until an annual income had been secured. The chairman stated that they had collected £12,200; when the hospital was in full working order it would have 40 beds, but in the meantime it was not proposed to have more than 12 beds, but the whole of the administrative block would be built and the estimated cost was £10,200. In the course of discussion Sir Matthew Arthur said that he did not think it was practicable to say they were not to build until they had an income, because he did not think they would get subscriptions towards maintenance until there was something to maintain. It was also pointed out that the sanatorium would appeal to a county with a population of 240,000 and there should be no difficulty in securing an annual income. Eventually it was decided that £10,000 should be spent in providing a sanatorium, including cost of site, and £2500 be ear-marked as maintenance reserve fund.

Northern Infirmary, Inverness.

At the annual meeting at Inverness on May 3rd Mr. C. M. Brown, honorary treasurer, reported that the ordinary revenue for 1904 amounted to £3548 and the expenditure to £5206, showing an adverse balance of £1658. The legacies received amounted to £1122. The average cost per patient last year was £19 11*s.* 10*d.*, showing a satisfactory decrease of £1 16*s.* 6*d.* per patient. The daily average of patients was 86·8, as compared with 76·3 in 1903. Mr. Alexander Grant expressed regret that inroads were being made on capital and Mr. Brown replied that they could only appeal to the public by way of remedy. Mr. D. Shaw, honorary secretary, showed that the committee of management had curtailed the expenditure last year to the lowest figures consistent with fairness to the patients. Mr. James Anderson said that the deficiency was not quite so bad as it usually was. For the past 40 years they had had invariably to draw upon legacies and it was perfectly legitimate to do so. There was really nothing alarming about the state of the funds. It would take about 22 years to exhaust the funds at their disposal. The reports of the secretary and the treasurer were adopted. Mr. Steele, banker, was added to the managers and house committee. Dr. W. A. Reid of Inverness was appointed house surgeon, he being the only applicant for the vacancy. Miss Macconnachie intimated her resignation of the post of matron, stating that she had accepted the appointment of matron-housekeeper of the Upper Banffshire Hospital at Dufftown. The managers tendered their thanks to Miss Macconnachie for her long services and the house committee was authorised to advertise for a matron and to report. It was remitted to the committee to continue the negotiations with the town council and district committee as to accommodation for fever patients.

May 9th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

Death of Mr. C. R. C. Tichborne, LL.D., D.P.H., L.R.C.S. Irel.

Professor Tichborne, who died at his residence, 15, North Great George's-street, Dublin, on May 1st, was well known to all the medical profession of that city, although he never engaged in general or hospital practice. He devoted his labours to analytical chemistry and was for a life-time chemist to the Apothecaries' Hall of Ireland which he represented for some years on the General Medical Council. He held the position of public analyst to many institutions and boards throughout Ireland. Many resolutions expressing the high esteem in which he was held by his colleagues were recently passed, more especially by the Apothecaries' Hall, the governors of which assembled at a special meeting on May 3rd. Similar resolutions were unanimously passed by the Royal Irish Academy and the Royal Academy of Music. Professor Tichborne was a highly skilled player of the 'cello.

Jervis Street Hospital, Dublin.

The annual meeting of the friends and supporters of Jervis Street Hospital, Dublin, took place on May 3rd. There was a very large attendance and the Right Hon. Lord Chief Baron Palles, who occupied the chair, delivered a long and eloquent appeal to the public in support of the charitable claims of this old-established institution.

Health of Belfast.

At the monthly meeting of the city corporation of Belfast, held on May 1st, it was reported that the number of cases of zymotic disease notified was more numerous than in the April report, typhoid and simple continued fevers being somewhat more numerous, whilst cases of diphtheria and erysipelas were slightly fewer in number. The death-rate from zymotic disease was rather higher, this being mainly attributable to measles, a disease which caused 32 deaths, those from all other zymotic diseases being 25. There had been no case of small-pox notified since Feb. 23rd and there was only one case in hospital which was still detained owing to complications. With reference to the new infectious diseases hospital, it was announced that it was proposed to put the whole institution under the care of a visiting physician and to have no resident medical officer or medical superintendent. Indeed, the house which was intended to be reserved for a resident medical officer has now been designated as a diphtheria ward.

Rainfall in Ulster during April.

In April rain fell in the north of Ireland on 26 days to the amount of 2·93 inches, which is more than the average (2·53). The total rainfall for this year is now 12·07 inches, which is over the average (11·74 inches).

Belfast District Asylum.

There are at present 1062 patients on the asylum register, 361 males and 369 females being at Belfast, 290 at Purdysburn, and 62 at Ballymena. It is very satisfactory to find that in all the new buildings at Purdysburn there are no extras except in the contracts and this is one for a corrugated iron roof costing £8 10*s.*

Quality of Milk and Meat.

After the completion of his duties as high sheriff of Belfast, and after having been selected as a Parliamentary candidate for one of the divisions of the city, Dr. Henry O'Neill went for a holiday on the continent, where he visited Copenhagen, Berlin, and other cities to study the inspection of meat and the milk problem. Since his return to Belfast, about ten days ago, he has been giving the public through the local press his views on these questions. He is strongly in favour of the stamping of all meat by the municipal authorities, which is obligatory in the continental cities, and he urges the same course of action in Belfast. Dr. O'Neill also describes the Danish method of dairying as seen in Copenhagen, of which he appears to approve. A writer in the Belfast *Northern Whig* of May 9th congratulates Dr. O'Neill on the "rapid strides he has made on this subject." He was formerly in favour of sterilised milk, but the real principle of all scientific modern dairying is to procure a pure untreated and natural milk, this being done by perfect cleanliness in milking, by lowering the temperature of the milk after it comes from the cow, by medical and veterinary inspection, and by delivery in sealed cans or vessels. This is the Danish method, as was pointed out by writers in the Belfast papers long before Dr. O'Neill visited Copenhagen.

May 8th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

The Re-opening of the Faculty of Medicine.

I HAVE already kept the readers of THE LANCET *au courant* with the recent troubles at the Faculty of Medicine in connexion with the course of lectures given by M. Gariel which resulted in the closing of the Faculty of Medicine. After the Easter holidays the Faculty re-opened and M. Gariel began his course of lectures again without any notable incident. The Corporate Association of Students has addressed a manifesto to its members asking them for the future to refrain from individual protestations but to give such protestations an impersonal and general character so that the association may be able to organise some collective and legal method of intervention with a view to the reformation of medical studies. At the conclusion of M. Gariel's lecture a large number of his

hearers applauded him and M. Debove, the dean of the faculty, who was present at the lecture, made a short speech in which he thanked the students and expressed his satisfaction that this distressing incident had terminated so satisfactorily.

The Identification of Formol in Milk.

At the meeting of the Academy of Sciences held on April 17th M. Nicolas read a communication upon a Simple Test for Formol in Milk. The test will show the presence of formol in the proportion of 1 part in 500,000. The casein is precipitated and filtered and to the filtrate are added one or two crystals of amidol. The tube is then corked and at the end of a minute or two if formol has been added to the milk a beautiful green fluorescence shows itself. The reaction may be hastened by warming the fluid, but in this case it is better to remove all albuminous coagulable substances by the addition of a little acetic acid and subsequent filtration.

The Ophthalmological Institute of Adolphe de Rothschild.

A new ophthalmological institute has just been founded in Paris and is about to be opened. It is destined exclusively for the treatment of diseases of the eye and receives patients of any religion or nationality provided solely that they are indigent or necessitous. Gratuitous consultations are given every day from 9 to 11 A.M. and from 1 to 3 P.M. On Tuesdays, Thursdays, and Saturdays additional consultations are given from 7 to 8 P.M.

May 9th.

Obituary.

SIR JOHN SIBBALD, M.D. EDIN., F.R.C.P. EDIN.

BY the death of Sir John Sibbald the senior ranks of the medical profession in Edinburgh have lost one of their most esteemed and pleasant members. In his own department he had ungrudging admiration extended to him, whilst amongst a wider professional circle he impressed men by his friendly bearing, his quiet courtesy, his calm judgment, and a little vein of Scotch humour. He was not an old man, although he had reached a little beyond the allotted three score years and ten, and he had every appearance of living a good many more years when the mortal malady, which rapidly ran its fatal course, was first recognised.

Sir John Sibbald was an Edinburgh man and was born there in 1833. He received his medical education in Edinburgh where he took his M.D. degree in 1854. His position amongst students is indicated by the fact that he was one of the Presidents of the Royal Medical Society. After holding some general appointments he finally decided to devote himself to lunacy work, and became an assistant at the Royal Edinburgh Asylum under Dr. Skae. From that position he was selected for the medical superintendentship of the Argyle and Bute Asylum in 1862. Eight years afterwards he was appointed a deputy Commissioner in Lunacy for Scotland and on the death of Sir James Coxe he was created a Commissioner. This latter position he held until 1899 when he retired under the age limit. On his retirement he was honoured with knighthood in recognition of his valuable public and official services. His life was devoted to improving the management and the treatment of the insane in Scotland. He did much towards initiating and fostering the views regarding the nature of mental affections which now prevail in the profession generally; he was a pioneer in reducing the prison-like arrangements in vogue in asylums at that time. He from time to time contributed important papers to the *Journal of Mental Science*, his earlier ones dealing with the most advanced continental work bearing upon insanity. For a short period before he became deputy Commissioner in Lunacy he edited the journal mentioned. In 1877 he delivered the Morison lectures at the Royal College of Physicians, Edinburgh, taking as his theme Insanity in its Public Aspect; these were published in book form. Since his retirement he published an important pamphlet entitled "Plans of Modern Asylums for Insane Poor," and so highly was his opinion esteemed on this question that the Edinburgh District Lunacy Board appointed him its medical adviser when the board had to decide on plans for its new asylum.

The last prominent public work on which he was engaged was during last year when the International Congress for Home Relief met in Edinburgh. Sir John Sibbald was chairman of the executive committee and many of his friends in Edinburgh remember the warm interest which he displayed in all matters appertaining to the work of the congress. One of the latest, if not the latest, of his writings must be the pamphlet which he put in the hands of members of that congress on the "Relief of the Poor in Edinburgh, 1904." The pamphlet dealt with public relief under the Poor-law and with private relief rendered by voluntary agencies and was mainly intended for the enlightenment of foreign representatives.

Sir John Sibbald died in his house in Edinburgh and was buried in Warriston Cemetery. The funeral was largely attended by representative members of the Royal College of Physicians, by past colleagues on the Board of Lunacy, and by many private friends.

THOMAS CREED, M.D. ST. AND., M.R.C.S. ENG. L.S.A.

ON April 20th, at Boscombe, Hants, Dr. Thomas Creed passed away at the age of 79 years, after a lingering and painful illness which he bore with great fortitude. From 1851 he practised for 45 years at Greenwich and did yeoman's service amongst the poor of that neighbourhood. For more than 40 years of this long residence in Greenwich he was one of the honorary medical officers of the Royal Kent Dispensary; at the centenary of this institution in 1883 and upon the foundation of the Miller Hospital he was appointed honorary physician to the latter. This post he held [illegible] 1891. On his resignation in February of this year [illegible] to a quieter practice at Boscombe he was ele[illegible] sulting physician to the combined institutio[illegible] monial, consisting of a purse of sovereigns [illegible] was presented to him by the Very Rev. Ca[illegible] behalf of his numerous old friends and [illegible] the respect in which he was held [illegible] brethren. In 1876 Dr. Creed was Pre[illegible] Kent Medico-Chirurgical Society and [illegible] in its meetings for many years.

Medical News

UNIVERSITY OF OXFORD.—At recent [illegible] tions in the subjects indicated the following candid[illegible] passed :—

Further examination in mathematics.—G. W. Carte, H. O. Gibson, S. B. Henson, R. E. Negus, A. Pearce-Gould, and A. S. Roe.

Elementary zoology.—P. P. W. Andrews, T. Bentham, J. L. Birley, A. Booth, G. W. Carte, A. R. Chavasse, H. E. Clarke, G. E. Downs, H. O. Gibson, H. Hinds, E. G. Martin, H. P. Newsholme, J. A. Noble, E. L. Pearce-Gould, E. W. M. H. Phillips, H. W. Scott-Wilson, C. J. G. Taylor, W. W. Wagstaffe, R. O. Ward, and T. S. Wright.

FOREIGN UNIVERSITY INTELLIGENCE.—*Bologna:* Dr. L. Cappelletti has been recognised as *privat-docent* of Neurology and Psychiatry.—*Cadiz:* Dr. I. Gimeno Rodriguez has been appointed Professor of Clinical Medicine.—*Florence:* Dr. E. Dacco has been recognised as *privat-docent* of Dermatology.—*Kharkoff:* Dr. Penski, *privat-docent*, has been promoted to the Extraordinary Professorship of Topographical Anatomy and Operative Medicine.—*Königsberg:* Dr. W. Rindfleisch and Dr. E. Rautenberg have been recognised as *privat-docenten* of Internal Medicine.—*Munich:* Dr. E. Meyer has been recognised as *privat-docent* of Medicine.—*Vienna:* Dr. Raimann has been recognisd as *privat-docent* of Psychiatry.—*Zürich:* Dr. K. Jung has been recognised as *privat-docent* of Psychiatry.

CENTENARIANS IN CORNWALL.—Mrs. Oliver of Newquay, Cornwall, celebrated her 101st birthday on May 2nd, when she was the recipient of many presents and congratulations. Mr. James Carne of St. Columb Minor, near Newquay, entered his 100th year on May 3rd.

LITERARY INTELLIGENCE.—Messrs. Green and Son of Edinburgh will shortly issue "Methods of Morbid Histology and Clinical Pathology," by Walker Hall and G. Herxheimer. It will include all the new methods for blood and nervous tissues and a very full bibliography. Special

types have been used in order to make the book convenient for laboratory work.

CHILDREN'S COUNTRY HOLIDAYS FUND.—His Royal Highness the Prince of Wales has again sent a donation of £5 to the honorary treasurer of the Children's Country Holidays Fund, 18, Buckingham-street, Strand, W.C., who appeals urgently for public support in order that many poor children may not be disappointed of their summer holiday.

Dr. James Grey Glover has received the following letter in reply to a communication made to the King in connexion with the celebration of the 102nd birthday of Miss Elizabeth Walker on May 8th:—

Windsor, May 8th.

I am commanded by the King to ask you to congratulate Miss Walker from him on the attainment of her 102nd birthday and to say that His Majesty is very glad to hear that she is in enjoyment of such good health. KNOLLYS.

WOMEN AND FORENSIC MEDICINE IN RUSSIA.—From July 13th this year, says the *Bourse Gazette*, it is intended to settle the question of allowing women medical practitioners to act as experts in matters connected with forensic medicine. For this purpose a law, already drafted by the Minister of Justice, is under consideration by the Imperial Council, containing the provision that female medical practitioners may be accepted for independent medico-legal testimony as to women and children.

CENTRAL MIDWIVES BOARD.—The members of the Central Midwives Board met on April 27th at 6, Suffolk-street, Pall Mall, Dr. F. H. Champneys being in the chair. A letter was received from Dr. J. R. Kaye, county medical [illegible] of the West Riding of Yorkshire, forwarding a communication from a conference of county medical officers [illegible]rmingham on March 10th last inquiring as to the [illegible]n of Rule E 2. This rule is as follows:—

[illegible] to a confinement a midwife must take with her: (*a*) an [illegible] giving enemata, a catheter, a pair of scissors, a clinical [illegible] and a nail-brush; (*b*) an efficient antiseptic for dis[illegible]hands, &c.; (*c*) an antiseptic for douching in special [illegible]ntiseptic lubricant for smearing the fingers, catheters, [illegible] and enema nozzles before they touch the patient.

[illegible] Midwives Board was asked whether it was [illegible]ecessary for a midwife to carry all the apparatus [illegible]n the rule and the opinion was expressed by the [illegible] of the Board that unless midwives fulfilled the [illegible]nts of the rules the question of striking them off [illegible] would arise. The decision of the Board was that [illegible]naye should be informed that the Central Midwives [illegible]ard possessed no dispensing power in the matter. The next business before the Board was the consideration of a letter from Dr. J. Niven, medical officer of health of Manchester, asking the Board as to the meaning to be attached to the word "malpractice" in Section 8 (2) of the Midwives Act. According to the Act the local supervising authorities are entrusted with the duty of investigating charges of malpractice on the part of any midwife practising within their area. After the question had been discussed for some time it was decided to send as a reply to the inquiry the statement that each case must be judged on its own merits. The Board then fixed the first examination for midwives to be held on June 27th and the second on Oct. 24th. In future four examinations would be held in each year, in January, April, July, and October. A letter was then read from the town clerk of Ramsgate inviting the Board to express an opinion as to whether the appointment of a Poor-law medical man as inspector of midwives would be suitable and proper. The members of the Central Midwives Board plainly stated that it was not one of their duties to express such opinions or to lay down rules but nevertheless the town clerk of Ramsgate was also to be informed after stating the above facts that the Board on the whole did not consider that such an appointment would be an advisable one. In the cases of three midwives who were charged with negligence the Board directed that they should be cited to appear before the Board. The first case of the three was reported on by Dr. Niven who stated that the local supervising authority in Manchester had found that a *primâ facie* case of negligence had been established against the midwife concerned. In the second case the clerk of the London County Council reported that the local supervising authority for the County of London had found that a *primâ-facie* case of negligence had been established against the midwife, and in the third case the local supervising authority for Aldershot was reported by Mr. W. B. Barclay to have found that a *primâ-facie* case of negligence had been established. 3976 women were passed under Section 2 of the Act and ordered for entry on the roll, the total number on the roll being 22,207.

METROPOLITAN HOSPITAL.—Princess Louise (Duchess of Argyll) on May 9th opened, at the residence of Lord and Lady Battersea, Surrey House, London, W., a two days' bazaar, which has been organised by the Ladies' Association of the Metropolitan Hospital, Kingsland-road, E., in aid of the general funds of that institution.

KING'S COLLEGE HOSPITAL.—The King's College Hospital removal committee, following the advice of its assessor, Mr. Rowland Plumbe, has awarded the first place to the design sent in by Mr. W. A. Pite, of the firm of Messrs. Pite and Balfour. The committee has also appointed Mr. Pite to act as the architect of the new hospital buildings.

UNIVERSITY OF CAMBRIDGE.—Mr. H. J. Waring, M.S., F.R.C.S., has been appointed an additional examiner in surgery for the M.B. and B.C. degrees.—Mr. W. Bateson, F.R.S., St. John's College, has been appointed deputy professor of zoology and comparative anatomy for the ensuing academical year.—At the Congregation on May 11th A. C. Ingram, St. John's College, was admitted by proxy to the degree of Doctor of Medicine.

DONATIONS AND BEQUESTS.—By the will of Mr. William Holborn £2000 are bequeathed to the Royal Hospital for Incurables, Putney, and £2000 to such hospitals for the sick in London as his executors shall select. In the event of their disagreeing this sum is to be paid to the London Hospital, Mile-end-road.—Mr. Joseph Proctor Mann has bequeathed by his will £100 each to Guy's Hospital, St. Thomas's Hospital, King's College Hospital, and Epsom College.

THE BACTERICIDAL ACTION OF HYDROGEN PEROXIDE ON THE GERMS IN WATER.—M. E. Bonjean has contributed to the Académie des Sciences the results (which are published in the *Comptes Rendus* for January, 1905) of a comparative study of the bactericidal action of commercial hydrogen peroxide solution and a solution of hydrogen peroxide prepared from calcium peroxide on the germs in the water of the Seine. Five litres of water were used for each test and the proportions of the bactericidal agents were varied. Nutritive gelatine cultures were made at intervals and counted after 15 and again after 30 days. The figures given show in a striking manner the greater bactericidal power of nascent hydrogen peroxide. It was found that 0·219 gramme of hydrogen peroxide in the form of the commercial solution was capable of sterilising a given volume of the water in six hours, whereas 0·060 gramme of hydrogen peroxide obtained at the time from calcium peroxide produced sterility in four hours. These experiments also show that hydrogen peroxide in the nascent state has the advantage of rapidity of action over the ordinary solution.

MARY WARDELL CONVALESCENT HOME FOR SCARLET FEVER.—The report for the year 1904 of this useful institution, which is situated at Brockley-hill, Stanmore, shows that 131 patients were admitted to the home during the period under notice. The great proportion of the cases received comes from the class of small tradesmen, clerks, and mechanics, though the labouring class form a considerable number, and the medical officers of health of the various local boards send many patients who have been treated in isolation hospitals. Though there has been comparative freedom from scarlet fever during the past three years in and around the metropolis a season of epidemic may come at any time, but whether the cases be few or many there must be a staff prepared to meet the requirements of all emergencies. This, however, is impossible without adequate financial aid. The home is greatly in need of funds and the committee is urging the necessity of raising a small endowment fund for the purpose of covering a portion of the outlay on salary and wages, which is a permanent charge on the yearly income of the home. Subscriptions and donations (payable to Miss Mary Wardell and crossed "Messrs. Barclay and Co.") may be sent to Messrs. Barclay and Co., Limited, 1, Pall Mall

hearers applauded him and M. Debove, the dean of the faculty, who was present at the lecture, made a short speech in which he thanked the students and expressed his satisfaction that this distressing incident had terminated so satisfactorily.

The Identification of Formol in Milk.

At the meeting of the Academy of Sciences held on April 17th M. Nicolas read a communication upon a Simple Test for Formol in Milk. The test will show the presence of formol in the proportion of 1 part in 500,000. The casein is precipitated and filtered and to the filtrate are added one or two crystals of amidol. The tube is then corked and at the end of a minute or two if formol has been added to the milk a beautiful green fluorescence shows itself. The reaction may be hastened by warming the fluid, but in this case it is better to remove all albuminous coagulable substances by the addition of a little acetic acid and subsequent filtration.

The Ophthalmological Institute of Adolphe de Rothschild.

A new ophthalmological institute has just been founded in Paris and is about to be opened. It is destined exclusively for the treatment of diseases of the eye and receives patients of any religion or nationality provided solely that they are indigent or necessitous. Gratuitous consultations are given every day from 9 to 11 A.M. and from 1 to 3 P.M. On Tuesdays, Thursdays, and Saturdays additional consultations are given from 7 to 8 P.M.

May 9th.

Obituary.

SIR JOHN SIBBALD, M.D. EDIN., F.R.C.P. EDIN.

BY the death of Sir John Sibbald the senior ranks of the medical profession in Edinburgh have lost one of their most esteemed and pleasant members. In his own department he had ungrudging admiration extended to him, whilst amongst a wider professional circle he impressed men by his friendly bearing, his quiet courtesy, his calm judgment, and a little vein of Scotch humour. He was not an old man, although he had reached a little beyond the allotted three score years and ten, and he had every appearance of living a good many more years when the mortal malady, which rapidly ran its fatal course, was first recognised.

Sir John Sibbald was an Edinburgh man and was born there in 1833. He received his medical education in Edinburgh where he took his M.D. degree in 1854. His position amongst students is indicated by the fact that he was one of the Presidents of the Royal Medical Society. After holding some general appointments he finally decided to devote himself to lunacy work, and became an assistant at the Royal Edinburgh Asylum under Dr. Skae. From that position he was selected for the medical superintendentship of the Argyle and Bute Asylum in 1862. Eight years afterwards he was appointed a deputy Commissioner in Lunacy for Scotland and on the death of Sir James Coxe he was created a Commissioner. This latter position he held until 1899 when he retired under the age limit. On his retirement he was honoured with knighthood in recognition of his valuable public and official services. His life was devoted to improving the management and the treatment of the insane in Scotland. He did much towards initiating and fostering the views regarding the nature of mental affections which now prevail in the profession generally; he was a pioneer in reducing the prison-like arrangements in vogue in asylums at that time. He from time to time contributed important papers to the *Journal of Mental Science*, his earlier ones dealing with the most advanced continental work bearing upon insanity. For a short period before he became deputy Commissioner in Lunacy he edited the journal mentioned. In 1877 he delivered the Morison lectures at the Royal College of Physicians, Edinburgh, taking as his theme Insanity in its Public Aspect; these were published in book form. Since his retirement he published an important pamphlet entitled "Plans of Modern Asylums for Insane Poor," and so highly was his opinion esteemed on this question that the Edinburgh District Lunacy Board appointed him its medical adviser when the board had to decide on plans for its new asylum.

The last prominent public work on which he was engaged was during last year when the International Congress for Home Relief met in Edinburgh. Sir John Sibbald was chairman of the executive committee and many of his friends in Edinburgh remember the warm interest which he displayed in all matters appertaining to the work of the congress. One of the latest, if not the latest, of his writings must be the pamphlet which he put in the hands of members of that congress on the "Relief of the Poor in Edinburgh, 1904." The pamphlet dealt with public relief under the Poor-law and with private relief rendered by voluntary agencies and was mainly intended for the enlightenment of foreign representatives.

Sir John Sibbald died in his house in Edinburgh and was buried in Warriston Cemetery. The funeral was largely attended by representative members of the Royal College of Physicians, by past colleagues on the Board of Lunacy, and by many private friends.

THOMAS CREED, M.D. ST. AND., M.R.C.S. ENG. L.S.A.

ON April 20th, at Boscombe, Hants, Dr. Thomas Creed passed away at the age of 79 years, after a lingering and painful illness which he bore with great fortitude. From 1851 he practised for 45 years at Greenwich and did yeoman's service amongst the poor of that neighbourhood. For more than 40 years of this long residence in Greenwich he was one of the honorary medical officers of the Royal Kent Dispensary; at the centenary of this institution in 1883 and upon the foundation of the Miller Hospital he was appointed honorary physician to the latter. This post he held till 1891. On his resignation in February of this year to retire to a quieter practice at Boscombe he was elected a consulting physician to the combined institutions and a testimonial, consisting of a purse of sovereigns with an address, was presented to him by the Very Rev. Canon O'Halloran on behalf of his numerous old friends and in appreciation of the respect in which he was held by his professional brethren. In 1876 Dr. Creed was President of the West Kent Medico-Chirurgical Society and took a keen interest in its meetings for many years.

Medical News.

UNIVERSITY OF OXFORD.—At recent examinations in the subjects indicated the following candidates have passed:—

Further examination in mathematics.—G. W. Carte, H. O. Gibson, S. B. Henson, R. E. Negus, A. Pearce-Gould, and A. S. Roe.
Elementary zoology.—P. P. W. Andrews, T. Bentham, J. L. Birley, A. Booth, G. W. Carte, A. R. Chavasse, H. E. Clarke, G. E. Downs, H. O. Gibson, H. Hinds, E. G. Martin, H. P. Newsholme, J. A. Noble, E. L. Pearce-Gould, E. W. M. H. Phillips, H. W. Scott-Wilson, C. J. G. Taylor, W. W. Wagstaffe, R. O. Ward, and T. S. Wright.

FOREIGN UNIVERSITY INTELLIGENCE.—*Bologna:* Dr. L. Cappelletti has been recognised as *privat-docent* of Neurology and Psychiatry.—*Cadiz:* Dr. I. Gimeno Rodriguez has been appointed Professor of Clinical Medicine.—*Florence:* Dr. E. Dacco has been recognised as *privat-docent* of Dermatology.—*Kharkoff:* Dr. Penski, *privat-docent*, has been promoted to the Extraordinary Professorship of Topographical Anatomy and Operative Medicine.—*Königsberg:* Dr. W. Rindfleisch and Dr. E. Rautenberg have been recognised as *privat-docenten* of Internal Medicine.—*Munich:* Dr. E. Meyer has been recognised as *privat-docent* of Medicine.—*Vienna:* Dr. Raimann has been recognisd as *privat-docent* of Psychiatry.—*Zürich:* Dr. K. Jung has been recognised as *privat-docent* of Psychiatry.

CENTENARIANS IN CORNWALL.—Mrs. Oliver of Newquay, Cornwall, celebrated her 101st birthday on May 2nd, when she was the recipient of many presents and congratulations. Mr. James Carne of St. Columb Minor, near Newquay, entered his 100th year on May 3rd.

LITERARY INTELLIGENCE.—Messrs. Green and Son of Edinburgh will shortly issue "Methods of Morbid Histology and Clinical Pathology," by Walker Hall and G. Herxheimer. It will include all the new methods for blood and nervous tissues and a very full bibliography. Special

types have been used in order to make the book convenient for laboratory work.

CHILDREN'S COUNTRY HOLIDAYS FUND.—His Royal Highness the Prince of Wales has again sent a donation of £5 to the honorary treasurer of the Children's Country Holidays Fund, 18, Buckingham-street, Strand, W.C., who appeals urgently for public support in order that many poor children may not be disappointed of their summer holiday.

Dr. James Grey Glover has received the following letter in reply to a communication made to the King in connexion with the celebration of the 102nd birthday of Miss Elizabeth Walker on May 8th:—

Windsor, May 8th.

I am commanded by the King to ask you to congratulate Miss Walker from him on the attainment of her 102nd birthday and to say that His Majesty is very glad to hear that she is in enjoyment of such good health. KNOLLYS.

WOMEN AND FORENSIC MEDICINE IN RUSSIA.—From July 13th this year, says the *Bourse Gazette*, it is intended to settle the question of allowing women medical practitioners to act as experts in matters connected with forensic medicine. For this purpose a law, already drafted by the Minister of Justice, is under consideration by the Imperial Council, containing the provision that female medical practitioners may be accepted for independent medico-legal testimony as to women and children.

CENTRAL MIDWIVES BOARD.—The members of the Central Midwives Board met on April 27th at 6, Suffolk-street, Pall Mall, Dr. F. H. Champneys being in the chair. A letter was received from Dr. J. R. Kaye, county medical officer of the West Riding of Yorkshire, forwarding a communication from a conference of county medical officers held at Birmingham on March 10th last inquiring as to the construction of Rule E 2. This rule is as follows:—

When called to a confinement a midwife must take with her: (*a*) an appliance for giving enemata, a catheter, a pair of scissors, a clinical thermometer, and a nail-brush; (*b*) an efficient antiseptic for disinfecting the hands, &c.; (*c*) an antiseptic for douching in special cases; (*d*) an antiseptic lubricant for smearing the fingers, catheters, douche nozzles, and enema nozzles before they touch the patient.

The Central Midwives Board was asked whether it was absolutely necessary for a midwife to carry all the apparatus mentioned in the rule and the opinion was expressed by the chairman of the Board that unless midwives fulfilled the requirements of the rules the question of striking them off the roll would arise. The decision of the Board was that Dr. Kaye should be informed that the Central Midwives Board possessed no dispensing power in the matter. The next business before the Board was the consideration of a letter from Dr. J. Niven, medical officer of health of Manchester, asking the Board as to the meaning to be attached to the word "malpractice" in Section 8 (2) of the Midwives Act. According to the Act the local supervising authorities are entrusted with the duty of investigating charges of malpractice on the part of any midwife practising within their area. After the question had been discussed for some time it was decided to send as a reply to the inquiry the statement that each case must be judged on its own merits. The Board then fixed the first examination for midwives to be held on June 27th and the second on Oct. 24th. In future four examinations would be held in each year, in January, April, July, and October. A letter was then read from the town clerk of Ramsgate inviting the Board to express an opinion as to whether the appointment of a Poor-law medical man as inspector of midwives would be suitable and proper. The members of the Central Midwives Board plainly stated that it was not one of their duties to express such opinions or to lay down rules but nevertheless the town clerk of Ramsgate was also to be informed after stating the above facts that the Board on the whole did not consider that such an appointment would be an advisable one. In the cases of three midwives who were charged with negligence the Board directed that they should be cited to appear before the Board. The first case of the three was reported on by Dr. Niven who stated that the local supervising authority in Manchester had found that a *primâ facie* case of negligence had been established against the midwife concerned. In the second case the clerk of the London County Council reported that the local supervising authority for the County of London had found that a *primâ-facie* case of negligence had been established against the midwife, and in the third case the local supervising authority for Aldershot was reported by Mr. W. B. Barclay to have found that a *primâ-facie* case of negligence had been established. 3976 women were passed under Section 2 of the Act and ordered for entry on the roll, the total number on the roll being 22,207.

METROPOLITAN HOSPITAL.—Princess Louise (Duchess of Argyll) on May 9th opened, at the residence of Lord and Lady Battersea, Surrey House, London, W., a two days' bazaar, which has been organised by the Ladies' Association of the Metropolitan Hospital, Kingsland-road, E., in aid of the general funds of that institution.

KING'S COLLEGE HOSPITAL.—The King's College Hospital removal committee, following the advice of its assessor, Mr. Rowland Plumbe, has awarded the first place to the design sent in by Mr. W. A. Pite, of the firm of Messrs. Pite and Balfour. The committee has also appointed Mr. Pite to act as the architect of the new hospital buildings.

UNIVERSITY OF CAMBRIDGE.—Mr. H. J. Waring, M.S., F.R.C.S., has been appointed an additional examiner in surgery for the M.B. and B.C. degrees.—Mr. W. Bateson, F.R.S., St. John's College, has been appointed deputy professor of zoology and comparative anatomy for the ensuing academical year.—At the Congregation on May 11th A. C. Ingram, St. John's College, was admitted by proxy to the degree of Doctor of Medicine.

DONATIONS AND BEQUESTS.—By the will of Mr. William Holborn £2000 are bequeathed to the Royal Hospital for Incurables, Putney, and £2000 to such hospitals for the sick in London as his executors shall select. In the event of their disagreeing this sum is to be paid to the London Hospital, Mile-end-road.—Mr. Joseph Proctor Mann has bequeathed by his will £100 each to Guy's Hospital, St. Thomas's Hospital, King's College Hospital, and Epsom College.

THE BACTERICIDAL ACTION OF HYDROGEN PEROXIDE ON THE GERMS IN WATER.—M. E. Bonjean has contributed to the Académie des Sciences the results (which are published in the *Comptes Rendus* for January, 1905) of a comparative study of the bactericidal action of commercial hydrogen peroxide solution and a solution of hydrogen peroxide prepared from calcium peroxide on the germs in the water of the Seine. Five litres of water were used for each test and the proportions of the bactericidal agents were varied. Nutritive gelatine cultures were made at intervals and counted after 15 and again after 30 days. The figures given show in a striking manner the greater bactericidal power of nascent hydrogen peroxide. It was found that 0·219 gramme of hydrogen peroxide in the form of the commercial solution was capable of sterilising a given volume of the water in six hours, whereas 0·060 gramme of hydrogen peroxide obtained at the time from calcium peroxide produced sterility in four hours. These experiments also show that hydrogen peroxide in the nascent state has the advantage of rapidity of action over the ordinary solution.

MARY WARDELL CONVALESCENT HOME FOR SCARLET FEVER.—The report for the year 1904 of this useful institution, which is situated at Brockley-hill, Stanmore, shows that 131 patients were admitted to the home during the period under notice. The great proportion of the cases received comes from the class of small tradesmen, clerks, and mechanics, though the labouring class form a considerable number, and the medical officers of health of the various local boards send many patients who have been treated in isolation hospitals. Though there has been comparative freedom from scarlet fever during the past three years in and around the metropolis a season of epidemic may come at any time, but whether the cases be few or many there must be a staff prepared to meet the requirements of all emergencies. This, however, is impossible without adequate financial aid. The home is greatly in need of funds and the committee is urging the necessity of raising a small endowment fund for the purpose of covering a portion of the outlay on salary and wages, which is a permanent charge on the yearly income of the home. Subscriptions and donations (payable to Miss Mary Wardell and crossed "Messrs. Barclay and Co.") may be sent to Messrs. Barclay and Co., Limited, 1, Pall Mall

East, London, S.W., or to Miss Mary Wardell, Stanmore, Middlesex, from whom further information can be obtained.

ROYAL COLLEGE OF SURGEONS IN IRELAND.—A general meeting of the Fellows will be held on Saturday, June 3rd, at 1 o'clock, to receive the annual report of the council.—A meeting will also be held on Monday, June 5th, at 1 o'clock, pursuant to the provisions of the Charters, to elect a president, vice-president, council, and secretary of the College for the ensuing year. Fellows who may desire to have their names printed on the list of candidates for office should signify their wish by letter to the Registrar, at the College, on or before Tuesday, May 23rd.

PRESENTATION TO A MEDICAL PRACTITIONER.—At the annual dinner of the "Pride of Milverton" Lodge of Foresters held at Milverton (Somerset) on April 25th, under the presidency of Sir A. A. Hood, the chairman, on behalf of the members of the club, presented Mr. Charles Randolph, M.R.C.S. Eng., L.R.C.P. Edin., with a silver revolving breakfast dish, a soup tureen, and a pair of entrée dishes together with an illuminated address containing the names of 161 subscribers to the presentation, in appreciation of his services as lodge surgeon since the formation of the club in March, 1884.

MEMORIAL TO THE LATE DR. T. MORTON.—The following committee has been formed in connexion with a proposed memorial to the late Dr. Thomas Morton: The Rev. Canon Duckworth, C.V.O., the Rev. W. H. Stone, Sir William H. Broadbent, Bart., K.C.V.O., General R. W. Lowry, C.B., Dr. S. H. Davson, Dr. W. Winslow Hall, Mr. F. W. Hunt, Mr. R. Newnham Davis, Mr. F. Jackson, Captain R. F. W. Ellis, Mr. F. E. Webb, Mr. H. Strousberg, Dr. R. R. Hardwicke, Mr. C. B. Allen, Mr. C. B. Lockwood, Mr. Seymour Lucas, R.A., Mr. John T. Taylor, I.S.O., Dr. G. Danford Thomas, and Mr. J. R. Cooper. Mr. Joseph White, of 7, Abercorn-place, London, N.W., is the honorary treasurer, to whom subscriptions may be sent.

SUSSEX MEDICAL BENEVOLENT SOCIETY.—The first meeting of this society was held at the Dispensary, Queen's-road, Brighton, on May 9th. Those present were Dr. C. F. Bailey, Mr. W. A. Bowring, Mr. G. Vere Benson (Lewes), Mr. W. Campbell (Hastings), Dr. W. C. Chaffey, Mr. Dodd, Dr. J. F. Gordon Dill, Mr. E. F. Frazer, Dr. W. H. Hillyer (East Grinstead), Dr. E. Hobhouse, Mr. W. R. Meyer (Hurst), Mr. G. Morgan, Dr. L. A. Parry, Mr. W. B. Prowse, Mr. C. S. Simpson, and Mr. J. Turton. Mr. Turton was elected president, Dr. J. C. Uhthoff was appointed treasurer, and Dr. Parry honorary secretary. The objects of the society (the membership of which is restricted to members of the medical profession) are to aid the widows and children of members dying in indigent circumstances, to assist members who are incapacitated from practising, and to help in the education of children of members so incapacitated. The secretary reported that 89 members of the profession in Sussex have already joined and he hoped now that the society had a good start the numbers would rapidly increase. The subscription is £1 1s. per annum and any medical man in the county is eligible for membership.

Parliamentary Intelligence.

NOTES ON CURRENT TOPICS.

Ventilation of the House of Commons.

A SMALL committee, consisting of Sir MICHAEL FOSTER, Dr. J. S. HALDANE of Oxford, and Dr. M. H. GORDON, is making a further inquiry into the ventilation of the House of Commons.

Medical Men and the Use of Alcohol.

When the Scotch Liquor Traffic (Local Veto) Bill was under consideration in the House of Commons on May 5th some discussion arose as to medical opinion in regard to the use of alcohol. One speaker quoted from a magazine article by Dr. R. Farquharson to the effect that when responsibilities are around us and the troubles of the world begin to close over our heads a cheering glass in strict moderation and at carefully selected times is of real use and can be defended both by physiology and common sense. Another speaker cited a statement to the contrary effect by Sir Frederick Treves. To all of which the LORD ADVOCATE replied thus: "As for the medical evidence on the subject we must be driven to the conclusion that in this case, as in others, doctors differ. Sir Frederick Treves has said: 'The use of alcohol is absolutely inconsistent with a surgeon's work or with any work demanding quick and alert judgment.' That, surely, is a proposition too extreme to receive acceptance from ordinary reasonable men. And when we hear it stated that alcohol is a poison I wonder if honourable Members are aware that the minority report of the Royal Commission contained these words: 'We must recognise the fact that most people still regard alcohol as an ordinary article of diet which is only harmful if taken in excess.' It is idle to say that alcohol is a poison and nothing else and that the use of it is inconsistent with any work demanding acute and alert judgment."

Small-pox Return.

On Monday, at the instance of Sir JOHN BATTY TUKE, a return was ordered to be prepared showing each port or other sanitary district in England and Wales (exclusive of any district wholly or partly in London), in respect of which during the year ended March 25th, 1905, cases of small-pox have been reported to the Local Government Board; the number of such cases; and also, where the number reported has exceeded 100, the estimated amount of the expenditure incurred by the sanitary authority in consequence of the occurrence of such cases.

HOUSE OF COMMONS.

WEDNESDAY, MAY 3RD.

Affairs of an Irish Asylum.

Mr. SLOAN asked the Chief Secretary to the Lord Lieutenant of Ireland whether any change had been made in the arrangement which permitted Dr. Kelly, the Roman Catholic Bishop of Cloyne, to fit out at the public expense a vacant industrial school at Youghal for the reception of insane patients and whether Dr. Kelly was paid a capitation grant for each patient; whether he was aware that the patients were nursed by nuns who had had no previous training in such duties, that there was no resident medical superintendent, and that the medical care of the patients was under the control of a visiting physician who had had no previous training in the diseases of the insane, although visiting physicians had been allowed to die out in all the other Irish and British asylums; that the house built at Youghal for the resident medical superintendent was occupied by a chaplain whose chief duty was to look after the spiritual welfare of the nuns; that the Under Secretary for Ireland had already remonstrated with the Bishop of Cloyne against these irregularities; if so, whether they had the approval of the inspectors; and whether such steps as were necessary would be taken to restore the lunatics now in the charge of the Bishop of Cloyne to proper supervision and control.—Mr. LONG answered: In reply to my honourable friend's question of Feb. 23rd last Mr. Wyndham made a very full statement on this matter which substantially covers the ground of the present question. It is only necessary to repeat that the two points connected with the administration of this auxiliary asylum in regard to which the inspectors have raised objection are: first, the appointment of a visiting instead of a resident medical officer; and, secondly, the resolutions of the committee of management relieving the resident medical superintendent of the Cork Asylum from all responsibility for the discipline and domestic management of the auxiliary. In regard to the first the consent of the Lord Lieutenant to the appointment of a visiting medical officer has only been given as a tentative measure which will be open to reconsideration if the arrangement should prove defective; and as to the second, the committee has been informed that the resolutions are illegal and have been called upon to correct the illegality. The Under Secretary has made representations on the subject to Dr. Kelly, Bishop of Ross, who is a member of the committee. The capitation grant is payable to the county council.

Isolation Hospital Accommodation at Wanstead and Woodford.

Mr. LOUIS SINCLAIR asked the President of the Local Government Board whether he was aware that Wanstead and Woodford were adjoining urban districts having populations of 9000 and 14,500 respectively; that Wanstead had ample isolation hospital accommodation and Woodford had none; that an inquiry was held in November last, under the Public Health Act, 1875, at the instigation of Woodford alone and in disregard of the remonstrance of Wanstead; that His Majesty's inspector reported in favour of the Local Government Board making a compulsory provisional order for the formation of a joint hospital board for the two districts; that a letter from the Wanstead urban council and a petition from the ratepayers had been sent to the Local Government Board against the order being made, Wanstead desiring to retain its own hospital and to maintain its own patients; and, if so, whether he would undertake, in the circumstances, that the Board would decline, at the instance of Woodford alone and in face of the opposition of Wanstead, to make a compulsory provisional order (subject to confirmation by Parliament) for the formation of a joint hospital board for the districts of Wanstead and Woodford combined.—Mr. GRANT LAWSON answered. He said: I am aware of the facts of this case which are generally as stated in the question. The matter is now under the consideration of the Local Government Board but I cannot at present state what its decision will be.

THURSDAY MAY 4TH.

Arsenic in Beer.

Dr. HUTCHINSON asked the President of the Local Government Board what steps had been taken by the officers of the Inland Revenue to test the various materials used in the manufacture of beer, to obtain a return of the specific ingredients so used, and to ascertain to what extent, if any, they were found to be contaminated with arsenic, and whether any standard of purity in beer had been laid down by the Inland Revenue.—Mr. AUSTEN CHAMBERLAIN, who replied, said: In respect to the first three portions of the honourable Member's question the procedure of the Board of Inland Revenue in exercising control and inspection over the ingredients which might contain arsenic and which are used in the manufacture of beer is that provided for in the Revenue Act of 1888 as extended in October, 1901; the revenue officials have caused frequent samples to

be taken of other ingredients than those immediately specified in the Act named. They have tested not only glucose and invert sugar but also caramel, malt, hops, and a number of brewers' worts, and in cases where beer regenerators and yeast foods have been found arsenical the manufacturer has either been cautioned or sanction to the use of the substance has been withheld. The Royal Commission on Arsenical Poisoning bears testimony in its report to the value of the work done by the Inland Revenue in connexion with the Government Laboratory, and it will be continued as advised by the Commission. In regard to the last paragraph of the question the Board of Inland Revenue has no authority to prescribe a standard of purity for beer.

Irish Post-office Medical Appointment.

Mr. CONOR O'KELLY asked the Postmaster-General whether he would state if any decision had yet been come to in connexion with the appointment of a medical officer to the staff of the Ballina Post-office, county Mayo, and whether it was proposed to attach a medical officer to the staff in that office when an appointment was made.—Lord STANLEY said: I have the matter under consideration and I hope to make an appointment very soon.

Supply of Surgical Appliances.

Mr. CONOR O'KELLY asked the Chief Secretary for Ireland to state the grounds on which the Local Government Board refused to sanction the acceptance by several Poor-law boards in the west of Ireland of the tenders for the supply of surgical appliances of Messrs. Adamson and Co., Ballina, seeing that this firm had already been contractors for similar goods to several of these unions and carried out their contracts in every case with satisfaction; and why, having excluded Messrs. Adamson's tenders in several western unions, the Local Government Board has sanctioned their tender in the Ballina union.—Mr. LONG said: The Board refused in the first instance to recognise this firm as qualified to contract for a number of unions because it did not comply with the requirements of the regulations. The firm subsequently undertook to comply with the regulations and the Board has allowed it to contract for a proportion of the unions referred to, including Ballina. The Board was unable, however, to allow the firm to contract for the remaining unions for which it tendered as it was satisfied that it could not adequately perform the contracts.

Non-Compliance with the Vaccination Acts at Brighton.

Mr. WEIR asked the President of the Local Government Board whether he was aware that the vaccination officer for the borough of Brighton had recently obtained warrants of distress upon the goods of several persons in the borough for alleged non-compliance with the terms of the Vaccination Act, 1898; and whether, seeing that this officer was employed by the Brighton board of guardians and paid by that body, he would state why they were not communicated with before such measures were resorted to.—Mr. GRANT LAWSON answered: The Local Government Board has not received any information as to the matter referred to, but in its opinion the application for a distress warrant forms part of the proceedings for the enforcement of the Vaccination Acts. These proceedings the vaccination officer is empowered to take without previous communication with the guardians.

MONDAY, MAY 8TH.

The General Medical Council.

Mr. WEIR asked the President of the Local Government Board whether he would take such steps as might be necessary to secure the representation of laymen on the General Medical Council.—Mr. AKERS-DOUGLAS, who replied, said: Under the Medical Act, 1886, Section 7, the General Medical Council consists of members nominated by the Privy Council and by the Royal Colleges and a number of other learned bodies, and of elected representatives of medical practitioners. There is nothing in the Act to prevent the nominating bodies choosing laymen but I am informed that no representations have ever reached the Privy Council Office in favour of the course proposed in the question.

The Plague in India.

Mr. HERBERT ROBERTS asked the Secretary of State for India whether, in view of the congested condition of the towns suffering from plague, he would invite the Government of India to give out building sites in healthy localities on easier terms to the poorer classes and reduce the fees on timber and other building materials.—Mr. BRODRICK said: In Bombay and Calcutta, where the question of congestion is most serious, the Government is actively promoting the provision of additional building accommodation for the poorer classes. Elsewhere such overcrowding as exists is due to the habits and predilections of the people rather than to absence of building land or dearness of materials. In plague-smitten localities assistance to move is often offered to the inhabitants but is not unseldom refused.—Mr. ROBERTS further asked the Secretary of State for India what was the estimated cost of the scientific investigation into plague in India and what proportion of this expenditure would be borne by the British Treasury; whether he would state what success had attended the work on Mr. Haffkine's system; whether the scientific expedition would have its headquarters at the Pasteur Institute at Kasauli; and whether the present investigation would proceed on the line of bacteriological research.—Mr. BRODRICK answered: The expenditure is estimated at £5000 for the current year. Inoculation is a valuable preventive but it is not popular and its effects are not regarded as permanent. The question as to the headquarters of the expedition will be settled locally between the Government of India and the head of the expedition, while the line of investigation will be determined by the scientific societies controlling the work. I have no doubt that bacteriological research will be largely resorted to.

Small-pox in Ireland.

Mr. HAYDEN asked the Chief Secretary for Ireland whether he was aware that small-pox was recently introduced into Mullingar and Athlone through two men who had been landed at Southampton from the steamship *Nile*; whether he could state the steps taken by the local authorities to prevent the spread of the disease and to what extent these steps were dependent on the consent of the persons who had come in contact with those affected; and what was the cost of the precautions taken.—Mr. LONG said: Yes, sir. The steps taken in the matter were the isolation of patients and "contacts" as far as possible; the disinfection of premises; the disinfection or destruction of infected clothes, &c.; and the vaccination or revaccination of "contacts." The latter cannot be isolated except with their own consent. The cost at Mullingar was £52 16*s.*; the cost at Athlone has not yet been ascertained.—Mr. HAYDEN also asked the Chief Secretary for Ireland whether he was aware that the Local Government Board for Ireland recently wrote to the Athlone board of guardians that they had no power to detain two persons who had come in contact with persons just arrived in Mullingar from Southampton and who were suffering from small-pox and that these men voluntarily submitted to isolation in the union hospital and there developed the disease; and whether, in view of the consequences which might be involved to the whole community had these men continued their avocations, he would introduce a Bill to confer the power to isolate such "contacts" upon the proper authorities in Ireland.—Mr. LONG said: The facts are as stated in the first part of the question. As already pointed out the isolation of small-pox "contacts" cannot be effected except with the consent of such persons. In ordinary circumstances it is held to be unnecessary to isolate the inmates of dwellings invaded by small-pox in districts in which the sanitary laws are properly administered and vaccination is efficiently carried out. I see no reason therefore for legislation on the subject.

Uncertified Deaths in Scotland.

Mr. WEIR asked the Lord Advocate whether he would state the number of uncertified deaths in Scotland and Ireland respectively for each year since 1900.—Mr. SCOTT DICKSON answered: The number of deaths from uncertified causes in Scotland during 1900 was 2757; during 1901, 2392; and during 1902, 2180. The figures for 1903-04 are not yet available. For information as to the Irish figures the honourable Member will probably apply to the Secretary to the Lord Lieutenant.

The Departmental Committee on Poor-law Medical Relief.

Mr. MUNRO-FERGUSON asked the Lord Advocate whether he proposed to take any further action upon the report of the Departmental Committee on Poor-law Medical Relief.—Mr. SCOTT DICKSON said: A Bill is in course of preparation which, as at present proposed, will embody certain of the recommendations of the Departmental Committee on Poor-law Medical Relief.

TUESDAY, MAY 9TH.

The Commission on Tuberculosis.

Mr. CHANNING asked the President of the Local Government Board what was the present position of the inquiry being held by the Commission on Tuberculosis and when the Commission might be expected to complete its inquiry and report.—Mr. GERALD BALFOUR said: I understand that the Royal Commission hopes to issue an interim report towards the end of the present year but that it is not possible to say at present when the final report will be issued.

An Importation of Small-pox.

Mr. HAYDEN asked the President of the Local Government Board whether there was power vested in the port authorities at Southampton and elsewhere or in the public health authorities to quarantine vessels upon which were persons suffering from, or suspected to be suffering from, infectious disease; if so, whether he could state why such power was not exercised in regard to the steamship *Nile*, which brought cases of small-pox into Southampton and through its passengers and crew spread the disease in various parts of England and Ireland; if there was no such power in either authority whether he would take steps to have it vested in those charged with the preservation of public health; and whether he could state the number of persons landed from the *Nile* who had developed this disease and also the number of those who came in contact with passengers or crew who had taken the disease and whether any deaths had resulted.—Mr. GERALD BALFOUR replied: The local authorities referred to are not empowered to quarantine vessels coming into their districts with small-pox cases on board, but if there is a person on board suffering from any dangerous infectious disorder he may be removed to hospital under a justice's order. I could not hold out any expectation that the former system of putting vessels into quarantine would be revived in this country. I understand that 16 persons in England and Wales who were landed from the *Nile* have since developed small-pox and that seven persons who came into contact with the passengers or crew have also developed the disease. Four cases of death from small-pox at Southampton have been reported to the Local Government Board as occurring since the arrival of the ship. The Board has not received any reports as to deaths from the disease at other places to which any of the crew or passengers proceeded on landing.

BOOKS, ETC., RECEIVED.

BAILLIÈRE, J. B., ET FILS, 19, Rue Hautefeuille, Paris.

Nouveau Traité de Médecine et de Thérapeutique. Publié en Fascicules, sous la Direction de MM. P. Brouardel et A. Gilbert. V. Paludisme et Trypanosomiase. Par A. Laveran, Membre de l'Institut et de l'Académie de Médecine. Price Fr.2·50.

BAILLIÈRE, TINDALL, AND COX, 8, Henrietta-street, Covent Garden, W.C.

Laryngeal Phthisis or Tubercular Laryngitis. By Richard Lake, F.R.C.S. Eng. Second edition, enlarged and rewritten by Harold Barwell, M.B. Lond., F.R.C.S. Eng., Laryngologist, Mount Vernon Hospital for Consumption, &c., Assistant Surgeon, Metropolitan Ear, Nose, and Throat Hospital. Price 6*s.* 6*d.* net.

COTSWORTH, M. B., Acomb, York, England.

The Rational Almanac, tracing the Evolution of Modern Almanacs from Ancient Ideas of Time, and Suggesting Improvements. By Moses B. Cotsworth. 180 illustrations explaining the Mystery of the Pyramids, Sphinx, Obelisks, Druidical Circles, Mounds, Vertical Stones, &c., erected to record yearly almanac times. Price 5*s.* net; or by post 5*s.* 4*d.*

GLAISHER, HENRY J., 57, Wigmore-street, Cavendish-square, W. (A. MALOINE, Paris.)

Mucomembranous Enterocolitis. By Paul Froussard, M.D., "Ancien Interne" of the Hospitals of Paris; Consulting Physician at Plombières-les-Bains, Vosges, France. Edited by Dr. Edward Blake. Price 2*s.* 6*d.* net.

GOOSE, AGAS H., 19, Rampant Horse-street, Norwich.
The Ritual of Temperance, and State Hygiene: Contributions towards a Rationale in National Healthiness. By H. Cooper Pattin, M.A., Doctor in Medicine and Diplomate in Public Health of the University of Cambridge, Medical Officer of Health for the picturesque and very ancient City of Norwich. Price 2s. 6d. net.

VIGOT FRÈRES, 23, Place de l'École-de-Médecine, Paris.
Des Grossesses Tubaires Méconnues. Par le Dr. Henri Bazalgette, Ancien Externe des Hôpitaux de Paris, Médaille de Bronze de l'Assistance Publique. Price not stated.

VOGEL, F. C. W., Leipzig.
Die Pathologisch-histologischen Untersuchungsmethoden. Von Prof. Dr. G. Schmorl, Ober-Medizinalrat und Prosektor am Stadtkrankenhause zu Dresden. Dritte neu bearbeitete Auflage. Price M.8.75.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, such information for gratuitous publication.*

BRETT, EDWARD SEYMOUR, M.B., Ch.B. Edin., has been appointed Assistant Medical Officer to the Mental Hospital at Seacliff, New Zealand.

CHERRY, T., M.D. Melb., has been appointed Acting Director for Agriculture in Victoria, Australia.

COUTTS, D., M.B., C.M. Glasg., has been appointed Assistant at Kingseat Asylum, Glasgow.

DOUGLAS, ALEXANDER, M.B., M.S. Edin., has been appointed a Port Health Officer, Oamaru, New Zealand.

EARLE, ROBERT CHARLES, M.R.C.S., L.S.A., has been appointed Health Officer of the Port of Wanganui, New Zealand.

FARRER, CLAUDE ST. AUBYN, L.R.C.P. & S. Edin., L.F.P.S. Glasg., has been re-appointed Clinical Assistant at the Samaritan Hospital for Women.

HINGSTON, CHARLES ALBERT, M.D., B.Sc. Lond., M.R.C.S. Eng., has been appointed Honorary Physician to the Crownhill Convalescent Home, near Plymouth.

JUDSON, J. E., M.R.C.S., L.R.C.P. Lond., has been appointed Honorary Assistant Medical Officer to the District Infirmary and Children's Hospital, Ashton-under-Lyne.

KELLY, JAMES PATRICK, M.B., has been appointed Acting Officer of Health of the shire of Wyndham, Victoria, Australia.

MAILER, RAMSAY, L.R.C.S. Edin., has been appointed Medical Superintendent of the Ararat Lunatic Asylum, Victoria, Australia, *pro tem.*

MAKGILL, ROBERT HALDANE, M.B. Edin., D.P.H. Cantab., has been appointed Bacteriologist to the Health Department, New Zealand.

NEIL, J. HARDIE, M.B., has been appointed a Medical Practitioner under the Workers' Compensation for Accidents Act, Auckland, New Zealand.

NEWELL, JOHN ALEXANDER, B.A., M.B., B.Ch., has been appointed Surgeon to H.M. Prison at Lyttelton, New Zealand.

PARKES, W. H., M.B., Ch.M. Edin., has been appointed Honorary Medical Officer to the Veterans' Home, Auckland, New Zealand.

TRENFIELD, GEORGE HENRY, M.R.C.S., L.R.C.P. Lond., has been appointed, *pro tem.*, Medical Officer of the Eighth District by the Bristol Board of Guardians.

WALL, VIVIAN F., L.R.C.P., M.R.C.S., L.S.A., has been appointed Honorary Anæsthetist to the Western Ophthalmic Hospital, Marylebone-road, W.

WATERFIELD, WILLIAM HENRY, L.R.C.P. & S. Irel., has been appointed Chairman of the Children's Committee of the Devonport (Devon) Board of Guardians.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

AUCHTERHOUSE, SIDLAW SANATORIUM.—Medical Superintendent. Salary £250 per annum.

BIRKENHEAD BOROUGH HOSPITAL.—Junior Resident House Surgeon. Salary £80 and fees.

BIRMINGHAM AND MIDLAND HOSPITAL FOR SKIN AND URINARY DISEASES, Birmingham.—Clinical Assistant. Honorarium at rate of 52 guineas per annum.

BODMIN, CORNWALL COUNTY ASYLUM.—Junior Assistant Medical Officer. Salary £135 per annum, rising to £155, with board, lodging, &c.

BRISTOL GENERAL HOSPITAL.—Assistant House Physician. Salary £60, with board, residence, &c.

BROADMOOR, BERKS, STATE CRIMINAL LUNATIC ASYLUM.—Junior Assistant Medical Officer, unmarried. Salary £200, rising to £225 per annum, with quarters, coals, gas, and attendance.

CANCER HOSPITAL, Fulham-road, S.W.—Assistant House Surgeon for six months, renewable. Salary £70 per annum, with board and residence.

CENTRAL LONDON OPHTHALMIC HOSPITAL, Gray's Inn-road, W.C.—House Surgeon. Salary at rate of £50 per annum, with board and residence.

COVENTRY AND WARWICKSHIRE HOSPITAL.—House Surgeon. Salary £100 per annum, with rooms, board, washing, and attendance. Also Assistant House Surgeon. Salary £60 per annum, with rooms, board, washing, and attendance.

DARENTH, NEAR DARTFORD, METROPOLITAN ASYLUMS BOARD ASYLUM.—Senior Assistant Medical Officer, unmarried. Salary £250 per annum, rising to £300, with rations, lodging, attendance, and washing.

DUNFERMLINE, CARNEGIE COLLEGE OF HYGIENE AND PHYSICAL TRAINING.—Medical Man. Salary £300 per annum.

EAST LONDON HOSPITAL FOR CHILDREN AND DISPENSARY FOR WOMEN, Shadwell, E.—House Physician. Honorarium of £25 at completion of six months' approved service, with board and residence.

EVELINA HOSPITAL FOR SICK CHILDREN, Southwark, S.E.—House Physician and House Surgeon. Salary £80 respectively, with board, residence, and washing. Also Assistant House Surgeon. Salary £70, with board, residence, and washing. Also Eight Clinical Assistants.

EXMINSTER, DEVON COUNTY ASYLUM.—Junior Assistant Medical Officer. Salary £125, rising to £156.

GRIMSBY AND DISTRICT HOSPITAL.—Resident House Surgeon. Salary according to qualifications, with lodging and washing.

GUY'S HOSPITAL DENTAL SCHOOL.—Travelling Scholarship. Value £100.

HULL, ROYAL INFIRMARY.—House Physician, unmarried. Salary 80 guineas per annum, with board and apartments.

LISTER INSTITUTE OF PREVENTIVE MEDICINE.—Assistant Bacteriologist to the Serum Department, Elstree, Herts. Salary £200 per annum, with rooms.

MARGATE, ROYAL SEA BATHING HOSPITAL.—Honorary Assistant Visiting Surgeon.

METROPOLITAN HOSPITAL, Kingsland-road, N.E. — Anæsthetist. Honorarium 25 guineas per annum.

MIDDLESEX COUNTY COUNCIL ASYLUM, St. Albans, Herts.—Second Assistant Medical Officer. Salary £220 per annum, with board and lodging.

MILLER HOSPITAL AND ROYAL KENT DISPENSARY, Greenwich-road, S.E.—Junior Medical Officer for six months. Salary £80 per annum, with board, attendance, and washing.

MUNDESLEY SANATORIUM, Norfolk.—Resident Medical Officer, unmarried.

NORFOLK AND NORWICH HOSPITAL.—House Physician, unmarried. Salary £80 a year, with board, lodging, and washing.

NORTHAMPTON GENERAL HOSPITAL.—House Surgeon, unmarried. Salary £100 per annum, with apartments, board, attendance, and washing.

NORTH-EASTERN HOSPITAL FOR CHILDREN, Hackney-road, E.—Two House Surgeons for six months. Salary at rate of £60 per annum, with board, residence, and laundry.

NORTH-WEST LONDON HOSPITAL, Kentish Town-road.—Resident Medical Officer, also Assistant Resident Medical Officer, both for six months. Salaries at rate of £50 per annum, with board, residence, and washing.

ROCHESTER, ST. BARTHOLOMEW'S HOSPITAL.—House Surgeon, also House Physician. Salaries £110 per annum, with board and residence.

ROYAL WATERLOO HOSPITAL FOR CHILDREN AND WOMEN, Waterloo Bridge-road, S.E.—Resident Medical Officer. Salary at rate of £100 per annum.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL, King William-street, West Strand, W.C.—House Surgeon for six months. Honorarium £25. Also Clinical Assistants for six months.

SOCIETY OF APOTHECARIES OF LONDON.—Examiner in Medicine.

SOMERSET, ADMINISTRATIVE COUNTY OF.—Consulting Medical Officer of Health. Salary £150 per annum.

THORPE, NORWICH, NORFOLK COUNTY ASYLUM.—Second Assistant Medical Officer, unmarried. Salary £150 per annum, with board, attendance, quarters, washing, &c.

VICTORIA HOSPITAL FOR CHILDREN, Tite-street, Chelsea, S.W.—House Surgeon for six months. Honorarium £25, with board and lodging.

WEST-END HOSPITAL FOR DISEASES OF THE NERVOUS SYSTEM, PARALYSIS, AND EPILEPSY, 73, Welbeck-street, London, W.—Honorary Assistant Physician.

WESTERN GENERAL DISPENSARY, Marylebone-road, N.W.—Honorary Physician.

WEST LONDON HOSPITAL, Hammersmith-road, W.—House Physician for six months. Board, lodging, and laundry provided.

WESTMINSTER GENERAL DISPENSARY.—Honorary Surgeon.

Births, Marriages, and Deaths.

BIRTHS.

BROCK.—On May 6th, at Fellows-road, South Hampstead, N.W., the wife of J. H. E. Brock, M.D., F.R.C.S., of a daughter.

COLLINGWOOD.—On May 9th, at Ashton-under-Lyne, the wife of Captain Percy H. Collingwood, R.A.M.C., of a daughter.

MARRIAGE.

THOMSON—HENDERSON.—On May 2nd, at Waltham Abbey, by the Rev. F. B. Johnston, vicar of the parish, Wm. Thomson, M.B., C.M., to Jeannie Brodie, second daughter of the late John Brodie Henderson, M.D.

DEATHS.

PAINE.—On May 5th, at Lynwood, Alverstoke, Hants, William Paine, M.R.C.S., aged 68 years.

SPICER.—On May 7th, Frederick Spicer, M.R.C.S., late Colonial Surgeon, South Australia, of Carleton-road, Tufnell-park, N., aged 85 years.

WALKER.—On May 7th, at 54, Maddox-street, London, W., of acute pneumonia, James G. Walker, M.B., C.M. Edin. Funeral service at St. George's Church, Hanover-square, W., on Saturday, May 13th, at 10.30 A.M. Friends will kindly accept this, the only, intimation.

WHITE.—On May 9th, at Carlton-hill, N.W., Charles White, Lieutenant-Colonel R.A.M.C., aged 64 years.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

Notes, Short Comments, and Answers to Correspondents.

THE WAYS OF THE QUACK.

As most of our readers know there is an election to the foundation of Epsom College to be held shortly. Details of the candidates for election with requests for votes are being sent out in the usual way. One medical man who is canvassing on behalf of a candidate in whom he is interested has been sending out circulars and for this purpose purchased a number of envelopes. Incidentally he cut one of these envelopes open and was naturally much surprised to find the interior side of the front of the envelope printed as follows:—

The Secretary,
Drouet Institute,
11, Marble Arch,
London, W.

This is, we have no hesitation in saying, an abominable method of advertising. In this particular instance anything better calculated to ruin the candidate's chance we cannot conceive, for any medical man seeing a circular sent out with the apparent connivance of the Drouet Institute would at once throw it into the waste-paper basket. A new terror will be added to life if the unhappy citizen cannot even buy a packet of envelopes without having the claims of quacks thrust upon him and we wonder that any respectable vendor of envelopes should consent to sell such goods as these upon which we now comment.

MEDICAL MATTERS IN THE LAY PRESS.

To the Editors of THE LANCET.

SIRS,—I am aware that it is not your practice to take notice of ignorant statements on medical matters by the lay press but it occurs to me that you may be interested to a slight extent on reading the inclosed comment on the Devereux case which appears in one of your contemporaries. It will be needless to remind you that in the Chapman (Klosowsky) case antimony was the poison used. It is to be hoped that readers with a taste for experiment will not be tempted to use strychnine for "preserving" purposes.

The post mortem.—Bodies well nourished: Strychnine had preserved them.—The awful contents of the trunk were not laid bare until it reached the mortuary. Here the doctors had a surprise. No unpleasant odour came from the remains. The bodies were frightfully huddled together but were in excellent preservation. It was also noticed that both the woman and children were well nourished. Absence of bruises indicated the agent employed by the murderer—poison: the perfect state of preservation of the bodies pointed to the poison used—strychnine. This is a deadly poison but it preserves the remains of the victims. In the case of one of Chapman's victims, exhumed at Warrington after being buried over a year, it was found that strychnine had kept the body in excellent condition.

False information given to an individual may mislead one person only but in the case of a newspaper boasting of 1,000,000 readers each error published must be multiplied by 1,000,000 or so. One reads a deal about compulsory education in the present day but I read a short time ago that a microbe is "a minute insect." A report of an inquest tells me that the deceased died of "serious" apoplexy (a logical if ignorant conclusion). Appendicitis, according to a halfpenny newspaper, is "inflammation of the kidneys." An enterprising weekly, describing a successful operation, gravely asserts that the subject had had his "appendage" removed and is doing well.

I am, Sirs, yours faithfully,
April 22nd, 1905. B.A. OXON.

"LIQUOZONE."

IN response to a number of inquiries which have reached us from our readers as to the composition of "liquozone" we may say that we have submitted a sample bought in the open market to our analytical department and the result of the analysis shows that it is simply a weak solution of sulphurous acid gas. It contains, also, probably as incidental impurities some free sulphuric acid, hydrochloric acid, traces of iron, and colouring matter. The total constituents other than water amounted to 1 per cent., the sulphur dioxide to 0·25 per cent. These results are perfectly consistent with the statement made by the makers that "the gas [in liquozone] is derived solely from the following substances which include the best producers of oxygen and producers of other germicidal gas: manganese dioxide, potassium chlorate, sodium nitrate, flowers sulphur, and red sanders. None of these substances is put into the product; nothing but the gases derived from them. And nothing whatever enters into liquozone save these gases and the liquid used to absorb them, plus a touch of colour." There is nothing in the nature of ozone in the liquid and, in fact, neither ozone nor oxygen could exist long in an excess of sulphurous acid gas. The process above described is, of course, a very laborious, not to say wasteful, way of producing a weak solution of sulphurous acid gas, but the long list of superfluous chemicals is no doubt calculated to convey an impression of the mysterious virtues of the precious fluid and besides "a process requiring large apparatus and from eight to 14 days' time" is doubtless held to justify the impudent price asked for a large sized bottle—viz., 2*s.* 3*d.* The vaunted cure-all properties of liquozone are a snare and a delusion.

DIFFICULTIES UNDER THE INFECTIOUS DISEASES NOTIFICATION ACT.

To the Editors of THE LANCET.

SIRS,—The public health and housing committee of the Poplar borough council desire me to reply to the letter under the above heading, signed "Thomas Marshall," which appeared in THE LANCET of April 29th. The committee appreciate the fairness with which the Editors of THE LANCET have made their criticisms on the evidence laid before them on one side, and in justice to the medical officer of health of this borough and themselves they desire me to explain the circumstances and to state the committee take the full responsibility for the action taken by their medical officer in this case. It is essential that medical practitioners should be responsible for their own notifications, and the council has authorised its medical officer to satisfy himself, if necessary with the aid of an independent medical practitioner, with regard to any such notifications, but it has also been the practice in any case of doubt, after a second practitioner has been called to a case, for the medical officer of health, if desired, to attend and state his opinion. I inclose copy of the correspondence in the case, from which you will be able to judge as to the accuracy of the statements of Mr. Marshall. Had Mr. Marshall stated the circumstances in his first letter to the medical officer as fully as in his letter to you and explained that a second medical practitioner had been consulted the medical officer would have had no hesitation in seeing the case and advising thereon.

I am, Sirs, yours faithfully,
Council Offices, Poplar, E., LEONARD POTTS,
May 9th, 1905. Town Clerk.

[INCLOSURE.]

DEAR SIR,—Would you kindly oblige me by looking at a case I have at —— Road? It is in a man 22 years of age, a clerk at —— Station. It started as typical *chicken-pox* but to me it is more than suspicious.

Yours truly,
(Sgd.) THOMAS MARSHALL.
Medical Officer of Health, Poplar.

18th April, 1905.

Dr. Thomas Marshall, 82, Devons-road.

DEAR SIR,—I am in receipt of your note respecting a case in —— Road. If you think the patient is suffering from small-pox you must notify the same to me as such; if you have any doubt about the case, I would advise you to call in a brother practitioner as my committee consider it no part of my duty to diagnose diseases for medical practitioners.

Yours faithfully,
(Sgd.) FREDK. WM. ALEXANDER,
Medical Officer of Health.

(The words omitted in above letters have been deleted by us to save any disclosure of the patient's identity.—ED. L.)

Mr. Marshall replied to Mr. Alexander in unnecessarily strong terms, being incensed at Mr. Alexander's refusal of assistance. We do not publish the letter, but after being addressed in such a manner Mr. Alexander could hardly be expected to do more in the matter. Speaking generally, however, every practitioner who seeks the help of the medical officer of health of his district ought to obtain it, and obtain it promptly. The following is the resolution of the council of the metropolitan borough of Poplar on the matter. It bears the date April 11th, 1905, and has reference to an unfortunate case of mistaken diagnosis:—

"That in the opinion of the council Mr. ..... was most improperly notified as suffering from small-pox on the 22nd day of January last; that his removal from home was then effected without any valid reason and that his return thereto on the following day after examination by the medical officers of the Metropolitan Asylums Board was amply justified; in consideration whereof, and the frequency and peril of such abortive notifications and illegal removals, the council hereby instructs its medical officer of health in every future case of notification to satisfy himself, if necessary with the aid and confirmation of an independent and reliable medical practitioner, that such notification is in all respects according to law, and that no reasonable apprehension need be entertained of serious harm resulting (to the patient affected thereby) from isolation by removal; also the council orders that whenever such reasonable apprehension is entertainable isolation without removal shall be in the best possible manner accomplished."

MOSQUITO NETS.

Mr. Alan Field, the author of a little book called "Verb. Sap. on Going to West Africa," writes to us to point out that the catalogues of many firms who cater for members of the public who are going to the tropics give illustrations of mosquito nets over a bed which are not only wrong but dangerous. The net is represented as being *outside* the supports, not tucked in, and reaching nearly to the ground so that it incloses the bottom of the bed and leaves a small open space between its bottom edge and the floor. Such an arrangement is useless and, as Mr. Field points out, the bottom of the net should always be tucked in under the mattress and should be hung *inside* the supports. It is a good plan

to have the lower two feet of the net all the way round made of thin calico or linen. This not only prevents the tearing of the net by the tucking in but if the sleeper should in his sleep roll over so as to touch the netting he will touch the calico or linen which has no holes in it and a mosquito therefore is unlikely to bite the portion of the body which touches the netting. We do not know the firms to which Mr. Field alludes, but they should certainly revise their catalogues.

TRAFFIC IN MEDICAL PRACTICES.

To the Editors of THE LANCET.

SIRS,—As one of the largest advertisers in your paper for 30 years past of medical practices for sale I presume I may claim the honour of sharing with yourselves the credit of inserting advertisements, 99 per cent. of which are, according to the letter in the *Daily Mail*, swindles. I would simply say in refutation of such a slanderous statement that every advertisement I insert is absolutely *bond fide*, and I do not believe for a moment that you or any other respectable paper would insert any advertisement you had any doubt about. The statement that "advertisement columns teem with notices of sale of practices of £500–£2000 a year" is absolutely false. I fail to see in your columns last week a single practice of £2000 a year. Who are we to recognise as the "heads" of the profession? It is common knowledge that many of the leading physicians and surgeons do their best to procure and recommend partnerships and practices for their less fortunate colleagues. Why should not members of an honourable and honoured profession who have toiled for perhaps 30 or 40 years to acquire a valuable connexion be entitled, when compelled by adverse circumstances to retire, to obtain the fair value for their goodwill. Purchasers who are disappointed with their bargain as a rule have only themselves to blame for failing to take precautions before purchase, for, as you justly remark in your annotation, no one but a fool would purchase without an expert examination of books. By kind permission of the *Daily Mail* I hope the medical profession and their representative papers will still be able to exist as before. As regards the question of the purity of all advertisements I venture to ask why the *Daily Mail* is accepting hundreds of pounds for display advertisements booming a certain concoction *guaranteed* to cure almost every disease in existence, and which the owners have spent £20,000 to produce!

I am, Sirs, yours faithfully,

Adam-street, W.C., May 9th, 1905. PERCIVAL TURNER.

DISTINCTIVE BADGES FOR CERTIFICATED NURSES.

Miss Dorothy A. Davey, a certificated obstetric nurse, writes to us from Streatham suggesting that every certificated nurse should wear a distinctive badge which "would obviate the necessity for any other registration of nurses or uniform as the public could tell at a glance whether or not the owner of the uniform had earned the right to wear it." Such badges, she says, should only be supplied by Government to nurses on production of their certificates. To show how the badges could be made Miss Davey inclosed a card of coloured illustrations showing six circular silver or bronze bands or rings (which a half-crown piece would nearly cover), four of the bands encircling a coloured St. George's cross, one a white St. George's cross, and one a fine line white St. Andrew's cross. The badges with bronze bands would be for fever nurses. The St. George's crosses are coloured red, blue, and green respectively for four and three years' certificates, two years, and one year. The white St. George's cross is reserved for the midwifery certificate and the fine line white St. Andrew's cross for the obstetric nursing certificate, and where these two certificates are combined the two crosses are combined. For the full training and midwifery the red St. George's cross is superimposed with a small white St. George's cross. Miss Davey adds that each coloured cross could be used in conjunction with the white cross and that on the reverse of the ring should be the owner's name.

A QUESTION OF ETHICS.

To the Editors of THE LANCET.

SIRS,—I have no doubt that it is far better for B to lose a patient than to commit a breach of a rule which admittedly lies at the foundation of consultations between neighbouring practitioners. If C will not employ A and B refuses to take the case he can, of course, employ any other practitioner he may choose, but in all probability, when he finds that B maintains his point, he will rather have A than a complete stranger.

I am, Sirs, yours faithfully,

May 9th, 1905. EQUITY.

THE PREVENTION OF CONSUMPTION.

WE have received a copy of the *St. Paul Pioneer Press* of April 2nd, containing a report of an address on "The Great White Plague," delivered by Dr. Reginald B. Leach in St. Paul, Minnesota, U.S.A., on March 29th. The address, which fills 14 columns of the newspaper, is illustrated with several views of sanatoriums. Dr. Leach urges that the State of Minnesota should give much increased support to its sanatoriums. His proposal is that the State should lay out $200,000 for the sanatorium treatment of the poorer class of tuberculous patients and that this sum should be supplemented by a further appropriation of not less than $25,000 for "pay beds," in order that citizens who are able and willing to pay may obtain sanatorium care in Minnesota. He predicts that in the course of time the legislature will provide for the compulsory segregation of tuberculous patients.

LUTON'S ARTIFICIAL SERUM.

To the Editors of THE LANCET.

SIRS,—I should feel much obliged if your readers could give me information as to results obtained in the treatment of tuberculosis when "Luton's artificial serum" is employed.

I am, Sirs, yours faithfully,

F. S. D. HOGG, M.R.C.S. Eng., &c.

Rickmansworth, Herts, May 8th, 1905.

WANTED—A HOME.

To the Editors of THE LANCET.

SIRS,—Can any reader kindly give the information of a permanent home where a young male adult with impaired motion of his right side could be placed? His friends are small dairy farmers and could contribute a moderate sum weekly for his maintenance.

I am, Sirs, yours faithfully,

May 3rd, 1905. RUSTIC.

MEDICAL TITLES.

To the Editors of THE LANCET.

SIRS,—Is it fair that one man passes an examination in medicine, surgery, and midwifery and gets L.S.A. only after his name and another who passes an examination in the same subjects is enabled to put after his name L.R.C.S., L.R.C.P.E., L.F.P.S.G., L.M.?

I am, Sirs, yours faithfully,

May 2nd, 1905. M.R.C.S., L.S.A.

Surgeon.—In our view a house surgeon, as much as any other gentleman, is bound by any agreement that he makes. We cannot say whether in any particular circumstances the authorities of a hospital would have legal redress for the infringement of a bond not to practise in the neighbourhood. An answer to such a question can only be given by a lawyer after consideration of the particular facts.

B.A.W.—We do not remember the case. Questions of privilege have frequently been debated in our columns, notably on Sept. 12th (p. 767) and 26th (p. 906), 1903; and Jan. 16th (p. 181), Feb. 20th (p. 537), Sept. 10th (p. 800), and Nov. 26th (p. 1513), 1904.

D.—We do not answer anonymous letters.

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (15th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (9.30 A.M.), Royal Free (2 P.M.), Guy's (1.30 P.M.).

TUESDAY (16th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Royal Ear (2 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), Soho-square (2 P.M.), Chelsea (2 P.M.), Central London Throat and Ear (2 P.M.).

WEDNESDAY (17th).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.) Middlesex (1.30 P.M.), Charing Cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. George's (Ophthalmic, 1 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Cancer (2 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.), Royal Ear (2 P.M.), Royal Orthopædic (3 P.M.).

THURSDAY (18th).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing Cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), St. Mark's (2 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.), Royal Orthopædic (9 A.M.).

FRIDAY (19th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing Cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), Ophthalmic (10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), City Orthopædic (2.30 P.M.), Soho-square (2 P.M.), Central London Throat and Ear (2 P.M.), Royal Ear (10 A.M.).

SATURDAY (20th).—Royal Free (9 A.M.), London (2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), University College (8.15 A.M.), Charing Cross (2 P.M.), St. George's (1 P.M.), St. Mary's (10 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

MONDAY (15th).—MEDICAL SOCIETY OF LONDON (11, Chandos-street, Cavendish-square, W.).—8.30 P.M. Conversazione. Reception by the President. 8.45 P.M. Presentation of the Fothergillian Medal to Sir Frederick Treves, Bart., G.C.V.O. 9 P.M. Oration:—Mr. H. Morris: The Financial Relation existing between the London Hospitals and the Associated Medical Schools, and the bearing of these Relations on Medical Education in London.

TUESDAY (16th).—PATHOLOGICAL SOCIETY OF LONDON (20, Hanover-square, W.).—8.30 P.M. Dr. H. F. Buzzard: Morbid Anatomy of Myasthenia Gravis.—Mr. C. Walker: On the Resemblance between Plimmer's Bodies in Malignant Growths and Certain Normal Constituents of the Cells of Gametogenic Tissues.—Dr. W. de Korté: Morbid Growth from Angora Ewe.—Mr. S. G. Shattock and Dr. C. G. Seligmann: True Hermaphroditism in a Leghorn Fowl.—Mr. H. Rundle: Congenital Deformities of Lower Extremities.—Dr. J. M. Bernstein: Broncho-pneumonia with Multiple Cavities. Card Specimen will be shown by Prof. R. T. Hewlett.

WEDNESDAY (17th).—ROYAL MICROSCOPICAL SOCIETY (20, Hanover-square, W.).—8 P.M. Exhibition of Slides of the Oribatidæ. Paper:—Mr. D. D. Jackson: The Movements of Diatoms and other Microscopic Plants.

ROYAL METEOROLOGICAL SOCIETY (70, Victoria-street, Westminster, S.W.).—4.30 P.M. Papers:—Mr. R. Strachan: Measurement of Evaporation.—Dr. J. Ball: Logarithmic Slide-Rule for reducing Readings of the Barometer to Sea-level.

THURSDAY (18th).—NEUROLOGICAL SOCIETY OF THE UNITED KINGDOM (11, Chandos-street, Cavendish-square, W.).—8.30 P.M. Papers:—Dr. R. F. Trevelyan: A Note on Tabes Dorsalis occurring in Husband, Wife, and Daughter.—Dr. C. R. Box and Dr. R. F. Buzzard: An Unusual Case of Combined Degeneration of the Cord associated with Anæmia.—Dr T. G. Stewart: Some Points in the Diagnosis of Tumours of the Frontal Lobes.

FRIDAY (19th).—SOCIETY FOR THE STUDY OF DISEASE IN CHILDREN (11, Chandos-street, W.).—Dr. H. Ashby (Manchester): Some of the Neuroses of Early Life. (Wightman Lecture.)

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

MONDAY (15th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Dr. A. Whitfield: Clinique. (Skin.) 5.15 P.M. Dr. W. Li. Andriezen: The Prodromes and Early Symptoms of Insanity.

POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—5 P.M. Dr. Ball: Practical Points in the Anatomy of the Ear (with lantern slides).

TUESDAY (16th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Dr. G. A. Sutherland: Clinique. (Medical.) 5.15 P.M. Dr. D. Ferrier: Disseminated Sclerosis.

POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—5 P.M. Dr. Ball: Practical Points in the Anatomy of the Ear (with lantern slides).

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Queen-square, Bloomsbury, W.C.).—3.30 P.M. Dr. A. Turner: Selected Cases.

NORTH-EAST LONDON POST-GRADUATE COLLEGE (Tottenham Hospital, N.).—4.30 P.M. Lecture-Demonstration:—Mr. H. W. Carson: Diagnosis of Appendicitis.

WEDNESDAY (17th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Mr. M. Collier: Clinique. (Surgical.) 5.15 P.M. Dr. D. Robinson: Hyper-secretion of the Vagina and Cervix Uteri.

POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—5 P.M. Dr. Beddard: Practical Medicine.

CENTRAL LONDON THROAT AND EAR HOSPITAL (Gray's Inn-road, W.C.).—5 P.M. Demonstration: Mr. S. Low: Oro and Laryngo-Pharynx.

NATIONAL ASSOCIATION FOR THE PREVENTION OF CONSUMPTION (Mansion House).—3 P.M. Meeting.

THURSDAY (18th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Mr. Hutchinson: Clinique: (Surgical.) 5.15 P.M. Mr. A. H. Tubby: Orthopædic Surgery.

POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—5 P.M. Dr. Davis: Pharyngitis, Causes and Treatment.

CHARING CROSS HOSPITAL.—4 P.M. Dr. W. Hunter: Demonstration of Medical Cases. (Post-Graduate Course.)

SAMARITAN FREE HOSPITAL FOR WOMEN (Marylebone-road, N.W.).—3 P.M. Lecture:—Mr. Malcolm: Shock.

NORTH-EAST LONDON POST-GRADUATE COLLEGE (Tottenham Hospital, N.).—4.30 P.M. Lecture-Demonstration:—Mr. H. W. Carson: Malignant Disease of the Large Intestine.

FRIDAY (19th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Mr. L. Paton: Clinique. (Eye.)

POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.). 5 P.M. Dr. Ball: Otorrhœa and its Treatment.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Queen-square, Bloomsbury, W.C.).—3.30 P.M. Sir Victor Horsley: Surgery of the Nervous System.

EDITORIAL NOTICES.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this office.

Lectures, original articles, and reports should be written on one side of the paper only, AND WHEN ACCOMPANIED BY BLOCKS IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers—not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

MANAGER'S NOTICES.

TO SUBSCRIBERS.

WILL Subscribers please note that only those subscriptions which are sent direct to the Proprietors of THE LANCET at their Offices, 423, Strand, W.C., are dealt with by them? Subscriptions paid to London or to local newsagents (with none of whom have the Proprietors any connexion whatever) do not reach THE LANCET Offices, and consequently inquiries concerning missing copies, &c., should be sent to the Agent to whom the subscription is paid, and *not* to THE LANCET Offices.

Subscribers, by sending their subscriptions direct to THE LANCET Offices, will ensure regularity in the despatch of their Journals and an earlier delivery than the majority of Agents are able to effect.

The rates of subscriptions, post free, either from THE LANCET Offices or from Agents, are:—

FOR THE UNITED KINGDOM.		TO THE COLONIES AND ABROAD.	
One Year	£1 12 6	One Year	£1 14 8
Six Months	0 16 3	Six Months	0 17 4
Three Months	0 8 2	Three Months	0 8 8

Subscriptions (which may commence at any time) are payable in advance. Cheques and Post Office Orders (crossed "London and Westminster Bank, Westminster Branch") should be made payable to the Manager, MR. CHARLES GOOD, THE LANCET Offices, 423, Strand, London, W.C.

SUBSCRIBERS ABROAD ARE PARTICULARLY REQUESTED TO NOTICE THE RATES OF SUBSCRIPTIONS GIVEN ABOVE. It has come to the knowledge of the Manager that in some cases higher rates are being charged, on the plea that the heavy weight of THE LANCET necessitates additional postage above the ordinary rate allowed for in the terms of subscriptions. Any demand for increased rates, on this or on any other ground, should be resisted. The Proprietors of THE LANCET have for many years paid, and continue to pay, the whole of the heavy cost of postage on overweight foreign issues; and Agents are authorised to collect, and do so collect, from the Proprietors the cost of such extra postage.

The Manager will be pleased to forward copies direct from the Offices to places abroad at the above rates, whatever be the weight of any of the copies so supplied. Address—THE MANAGER, THE LANCET OFFICES, 423, STRAND, LONDON, ENGLAND.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, May 11th, 1905.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Rain-fall.	Solar Radia in Vacuo.	Maximum Temp. Shade.	Min. Temp.	Wet Bulb.	Dry Bulb.	Remarks at 8.30 A.M.
May 5	30·38	N.E.	...	101	61	44	44	47	Cloudy
,, 6	30·28	N.E.	...	101	69	41	44	47	Cloudy
,, 7	30·11	W.	...	109	70	46	49	54	Fine
,, 8	30·09	N.E.	...	107	61	44	49	54	Fine
,, 9	30·40	N.	...	99	63	43	45	51	Fine
,, 10	30·36	N.W.	...	110	70	45	49	53	Fine
,, 11	30·20	WNW	...	112	67	48	50	57	Fine

During the week marked copies of the following newspapers have been received:—*Lincolnshire Echo, Devon and Exeter Gazette, Surrey Comet, Reading Mercury, Daily News, Liverpool Post and Mercury, Standard, Hertfordshire Mercury, Morning Leader, Plymouth Mercury, Freeman's Journal, Liverpool Courier, Mining Journal, National Service Journal, Local Government Chronicle, Newcastle Journal, Manchester City News, &c.*

Communications, Letters, &c., have been received from—

A.—Dr. C. T. Andrew, Lond.; Messrs. C. Ash and Sons, Lond.; Dr. T. D. Acland, Lond.; Association Internationale de la Presse Médicale, Paris, Secretary of; Dr. Henry Ashby, Manchester.

B.—Dr. J. L. Bogie, Raveno, Italy; Dr. R. Browne-Carthew, Vernet-les-Bains; Captain G. T. Birdwood, I.M.S., Agra; Mr. A. C. Burnley, Lond.; Benger's Food, Ltd., Manchester; Sir W. H. Broadbent, Bart., Lond.; Dr. R. Blondel, Paris; Mr. G. Sherman Bigg, Lond.; Battersea, Medical Officer of Health of.

C.—Mr. A. J. Campbell, Lond.; Dr. R. A. Campbell, Glasgow; Cornwall County Asylum, Bodmin, Medical Superintendent of; Coventry and Warwickshire Hospital, Secretary of; Dr. W. Carter, Liverpool; Children's Country Holidays Fund, Lond., Secretary of; Mr. H. Colman, Paris; Mr. C. Willett Cunnington, Lond.; Dr. D. M. Cassidy, Lancaster; Messrs. A. Constable and Co., Lond.; Messrs. T. Christy and Co., Lond.

D.—Miss D. A. Davey, Lond.; Messrs. Dakin Bros., Lond.; Mr. E. Darke, Lond.; Dr. E. W. Diver, Newcastle-on-Tyne; Mr. T. Dixon, Lond.; Dr. Douty, Paris; Dermatological Society of Great Britain and Ireland, Hon. Secretary of; Disgusted.

E.—Messrs. Evans, Sons, Lescher, and Webb, Lond.; Ebbw Vale Workmen's Doctors' Fund, Chapel Town, Monmouthshire; Dr. Charles Esmonet, Paris; Dr. G. Leslie Eastes, Lond.

F.—Mr. P. J. Freyer, Lond.; Miss Flachfeld, Lond.

G.—Dr. Alfred Greenwood, Blackburn; Galak Milk Products, Lond.; Dr. P. N. Gerrard, Krian, Perak; Mr. J. H. Goring, Lond.; Dr. J. G. Garson, Lond.

H.—Dr. W. B. Harley, Hove; Mr. T. Hunt, Wellington College; Dr. W. R. Huggard, Davos Platz; Messrs. Haasenstein and Vogler, Geneva; Mr. J. Hoole, Parwich; Mr. Charles H. Hartt, Lond.; Dr. Laurence Humphry, Cambridge; Mr. F. S. Hawkes, Lond.; Mr. Cornelius Hanbury, Little Berkhampstead; Dr. J. Coote Hibbert, Newcastle-on-Tyne; Hunterian Society, Lond., Senior Hon. Secretary of; Miss H.

I.—Incorporated Society of Medical Officers of Health, Lond., Executive Secretary of.

J.—Mr. L. F. Johnson, Oxford; Mr. D. Ogden Jones, Toronto; J. M.

K.—Mr. D. F. Kennard, Lond.; Messrs. B. Kuhn and Co., Lond.; Messrs. Knight, Frank, and Rutley, Lond.; Messrs. R. A. Knight and Co., Lond.

L.—Mr. H. K. Lewis, Lond.; Mr. Francis J. Loveday, Lond.; Mr. F. W. Lowndes, Liverpool; Mr. John G. Leigh, Lond.; London Pen Co., Lond.; Leyton-stone College, Leyton, Principal of; Dr. A. Lorand, Carlsberg.

M.—Mr. D. Marchant, Eastbourne; Messrs. J. Maythorn and Son, Biggleswade; Messrs. Morris and Birch, Lond.; Messrs. Merryweather, Lond.; Mundesley Sanatorium, Secretary of; Mr. A. Maude, Westerham; M. N. G.; Dr. H. A. D. Moore, Rotherham; Dr. J. L. Morton, Lond.; Dr. F. J. McCann, Lond.; Manchester Medical Society, Hon. Secretary of; Mr. R. Mossop, Lond.

N.—Mr. L. E. C. Norbury, Eltham; Neurological Society of the United Kingdom, Lond., Hon. Secretary of; National Health Society, Secretary of; Mr. J. C. Needes, Lond.; Mr. H. Needes, Lond.

O.—Professor W. Osler, Baltimore; Odol Chemical Works, Lond.; Otological Society of the United Kingdom, Hon. Secretary of; Obstetrical Society of London, Secretary of.

P.—Dr. G. Newton Pitt, Lond.; Mr. Jaime Pont, Barcelona; Mr. Y. J. Pentland, Edinburgh; Dr. Stanislaw Pinkus, Lond.; Messrs. Parke, Davis, and Co., Lond.; Mr. John Poland, Lond.; Mr. Parker-Rhodes, Lond.; Port of London, Medical Officer of Health of; Mr. J. J. Perkins, Lond.; Dr. D. W. Patterson, Newcastle-on-Tyne; Messrs. Peacock and Hadley, Lond.

R.—Mr. W. Ramsay, Melbourne, Australia; Rawsco, Lond.; Royal College of Physicians, Edinburgh, Secretary of; Messrs. Robertson and Scott, Edinburgh; Mr. E. A. Rawlence, Salisbury; Mr. A. Rivers-Willson, Oxford.

S.—Dr. K. S. Storrs, Chelmsford; Messrs. Sharland and Co., Lond.; Mr. T. A. Southern, Cardiff; Messrs. W. Sykes and Co., Lond.; Mr. A. Stenhouse, Glasgow; Mr. Simeon Snell, Sheffield; Mr. C. St. Aubyn-Farrer, Lond.; Dr. G. A. Sutherland, Lond.; Dr. R. Saundby, Birmingham; Samaritan Free Hospital for Women, Lond., Secretary of; Society for the Study of Disease in Children, Lond., Secretary of; Dr. D. W. Samways, Mentone; "Specialist Press," Lond.; Messrs. W. H. Smith and Son, Lond.; Messrs. Spiers and Pond, Lond.; Dr. P. B. Smith, San Remo; Scholastic, Clerical, &c., Association, Lond.; Salford Royal Hospital, Secretary of; Savile Club, Lond., Hon. Secretary of.

T.—Mr. T. H. Thomas, Cardiff; Mr. J. Lynn Thomas, Cardiff; Mr. J. Thin, Edinburgh.

U.—University College, Lond., Principal of.

V.—Mr. J. W. Vickers, Lond.; Mr. H. Vincent, Paris.

W.—Mr. E. White-Wallis, Lond.; Mr. W. A. Weightman, Liverpool; Messrs. H. Whiteway and Co., Whimple; Messrs. A. Westwood and Son, Cupar, Fife; Dr. Tucker Wise, Montreux; Dr. W. Bertram Watson, Harrogate; Windsor and District Medical Society, Hon. Secretary of; Western General Dispensary, Lond., Secretary of; W. P.; Messrs. J. Wright and Co., Bristol; Willis, Ltd., Lond.; Messrs. H. Wilson and Son, Lond.; Messrs. W. Watson and Sons, Lond.

Letters, each with enclosure, are also acknowledged from—

A.—Mr. F. C. Angear, Chatham; Messrs. Allen and Hanburys, Lond.; A. B. B.; A. E. H.; A. L.; Dr. A. E. Ash, Weston-super-Mare.

B.—Mr. A. H. Black, Harrogate; Borough of Bury, Treasurer of; Birmingham and Midland Ear and Throat Hospital, Secretary of; Messrs. Brady and Martin, Newcastle-on-Tyne; Mr. W. G. Bott, Lond.; Dr. J. F. Bos, Kildonan; Dr. D. Bosanyi, Buda Pest; Miss R. Brown, Lond.; Mr. P. N. Brown, Frimley; Mrs. E. Behnke, Lond.; Mr. B. B. Brahmachar, Santipur; Dr. A. M. Barford, Chichester; Dr. J. Burnet, Edinburgh; Bayer Co., Lond.; Bovril, Ltd., Lond.; Messrs. Barton, Hayward, and Ford, Lond.; Birmingham and Midland Hospital for Skin Diseases, Secretary of; Birmingham General Hospital, House Governor of; Barnwood House Hospital, Gloucester; Professor M. Bombarda, Lisbon; Messrs. J. C. Bullock and Co., Lond.

C.—Mr. J. Jackson Clarke, Lond.; Mr. R. Collins, Sawbridgeworth; Mr. J. J. Crowley, Cork; Condensed Peptonised Milk Co., Lond.; Messrs. Carter, Lond.; Cotswold Sanatorium, Cheltenham, Secretary of; C. P. W.; Messrs. Cordes, Hermanni, and Co., Hamburg; Miss G. Clarke, Hereford; C. R. K.; Mr. F. W. Clarke, Chorlton-cum-Hardy; College of Preceptors, Lond., Secretary of.

D.—Durham County Council, Durham, Clerk of; D. W. S.; Doctor, Sharnbrook; D. C. P.; Mr. J. T. Davenport, Lond.; Dairymple Home, Rickmansworth, Medical Superintendent of; Mr. J. Spencer Daniell, Edinburgh.

E.—Mr. G. H. Evans, Leominster.

F.—F. C. A.; F. R. G.; Mrs. Ferguson, Barnet; F. L.

G.—Messrs. R. W. Greeff and Co., Lond.; Messrs. Gould and Co., Lond.; G. N. M.; G. G.; Grimsby and District Hospital, Matron of; G. D. P.; G. H. W.

H.—Mr. W. Halley, Lond.; H. B.; Messrs. Heal and Son, Lond.; Messrs. Hobson and Co., Lond.; Fleet-Surgeon W. E. Home, R.N., Portland; "Herrison," Dorchester, Medical Superintendent of; Mr. T. Harling, Muker; H. B. E.; Fleet-Surgeon F. Harper, R.N., Portsmouth; Mr. T. Holland, Lond.; Hastings and St. Leonards Hospital, Secretary of.

I.—Lieutenant-Colonel D. L. Irvine, R.A.M.C., Farnham.

J.—Messrs. Jacob and Johnson, Winchester; J. G.; J. B.

K.—Mr. J. Kelleher, Macroom.

L.—Mr. W. A. Liston, Cardonald; Mrs. Linfoot, Bournemouth; London Publicity Co., Secretary of; Mr. A. Lawson, Lond.; Mr. H. H. Lacy, Warwick; Locum, Waltham; Lister Institute of Preventive Medicine, Elstree; Mr. A. C. A. Lovegrove, Lond.

M.—Dr. R. J. Mills, Norwich; Dr. D. McIntosh, Cwmtillery; Mr. R. M. McQueen, Lond.; Mr. R. Mosse, Berlin; Mr. A. Maloine, Paris; Messrs. Midgley, Manchester; Mr. H. Morris, Lond.; Moat House, Tamworth; Mr. H. Mills, Ufficulme; Dr. C. W. Macgillivray, Edinburgh; M. S. M. D.; M. F. C.

N.—North Staffordshire Infirmary, Stoke-on-Trent, Secretary of; "Nouilly," Burgess Hill; N. C.

O.—Mr. C. A. F. Osborne, Old Catton; Mr. J. G. Owen, Kingston-on-Thames.

P.—Miss Potter, Wolverhampton; Messrs. Parry and Co., Lond.; Mr. W. K. Parbury, Sharnbrook; Dr. F. Craddock Palmer, Alverstoke.

R.—Mr. R. H. F. Routh, Bridgwater; Reuter's Telegram Co., Lond.; Radcliffe Infirmary, Oxford, Secretary of; Messrs. R. J. Reid and Co., Lond.; Mr. G. A. Roberts, Wolverhampton; Rotherham Hospital, Secretary of.

S.—Rev. G. Simmers, Ramsgate; Mr. R. F. Stephens, St. Austell; Stockport Infirmary, Secretary of; S. G. G.; Sillwood Lodge, Brighton, Proprietors of; Messrs. W. B. Saunders and Co., Lond.; Dr. J. Stephen, Edinburgh; Dr. W. R. Smith, Lond.; Mr. Shiels, Dunbar; St. Mungo's College, Glasgow, Registrar of; Sheffield Royal Hospital, Secretary of; Sheffield Children's Hospital, Secretary of; Southport Infirmary, Secretary of; St. George's Hospital Medical School, Lond., Dean of; S. R.; Miss Shearsby, Southsea.

T.—Dr. L. Thornley, Pontardawe; Mr. J. B. Thomas, Aberdare; Dr. J. H. Tonking, Camborne; Dr. A. J. J. Triado, Lawlers, Western Australia; T. M. D.; Mr. J. Taylor, Liverpool; Miss A. Taylor, Astley; T. D.; Mr. D. J. Thomas, Nantymoel; Dr. J. G. Tomkinson, Rhyl; T. H. R.

V.—Mr. W. Van Praagh, Lond.; Messrs. P. Vallentine and Son, Lond.; Vinolia Co., Lond.

W.—Mr. A. O. Way, Romsey; Rev. J. A. Wix, Questhick; Wonford House Hospital, Exeter, Treasurer of; W. J. M.; W. S.; Mr. E. Whitaker, Lond.; Messrs. J. P. and C. B. Wagstaff, Hornchurch; Weston-super-Mare Hospital, Secretary of; W. Q. B.; Dr. P. W. Williams, Clifton; Mr. P. P. Wainwright, Sale; Mr. A. J. Wigmore, Leominster; Mr. P. W. Walker, Birmingham; W. E. S.

EVERY FRIDAY.

THE LANCET.

PRICE SEVENPENCE.

SUBSCRIPTION, POST FREE.

FOR THE UNITED KINGDOM.		TO THE COLONIES AND ABROAD.	
One Year	£1 12 6	One Year	£1 14 8
Six Months	0 16 3	Six Months	0 17 4
Three Months	0 8 2	Three Months	0 8 8

Subscriptions (which may commence at any time) are payable in advance.

ADVERTISING.

Books and Publications ...	Seven Lines and under	£0 5 0
Official and General Announcements	Ditto	0 5 0
Trade and Miscellaneous Advertisements and Situations Vacant	Ditto	0 4 6
	Every additional Line	0 0 6

Situations wanted: First 30 words, 2s. 6d.; per additional 8 words, 6d.
Quarter Page, £1 10s. Half a Page, £2 15s. An Entire Page, £5 5s.

An original and novel feature of "THE LANCET General Advertiser" is a Special Index to Advertisements on pages 2 and 4, which not only affords a ready means of finding any notice but is in itself an *additional* advertisement.

THE LANCET can be obtained at all Messrs. W. H. Smith and Son's and other Railway Bookstalls throughout the United Kingdom. Advertisements are also received by them and all other Advertising Agents.

Agent for the Advertisement Department in France—J. ASTIER, 31 Rue Bapts, Asnières, Paris.